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**Table 1. Science and engineering (S&E) doctorates awarded,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Science and engineering, total | 21,732 | 22,868 | 24,023 | 24,675 | 25,443 | 26,205 | 26,535 | 27,229 | 27,180 | 27,272 |
| Engineering, total | 4,543 | 4,894 | 5,214 | 5,438 | 5,698 | 5,822 | 6,008 | 6,305 | 6,098 | 5,919 |
| Aeronautical/astronautical engineering | 178 | 192 | 207 | 234 | 228 | 230 | 252 | 287 | 270 | 242 |
| Chemical engineering, total | 712 | 658 | 691 | 725 | 737 | 725 | 708 | 798 | 767 | 774 |
| Chemical | 625 | 561 | 621 | 607 | 624 | 630 | 602 | 681 | 662 | 667 |
| Petroleum | 29 | 49 | 28 | 54 | 52 | 42 | 48 | 52 | 51 | 48 |
| Polymer/plastics ¹ | 58 | 48 | 42 | 64 | 61 | 53 | 58 | 65 | 54 | 59 |
| Civil engineering, total | 538 | 553 | 575 | 594 | 624 | 684 | 656 | 697 | 655 | 650 |
| Civil | 498 | 505 | 509 | 540 | 563 | 602 | 572 | 599 | 592 | 587 |
| Environmental health | 40 | 48 | 66 | 54 | 61 | 82 | 84 | 98 | 63 | 63 |
| Electrical engineering, total | 1,137 | 1,276 | 1,405 | 1,483 | 1,543 | 1,673 | 1,731 | 1,740 | 1,718 | 1,593 |
| Communications | 25 | 35 | 21 | 30 | 22 | 33 | 29 | 32 | 33 | 40 |
| Computer | 117 | 131 | 178 | 175 | 167 | 202 | 189 | 208 | 227 | 210 |
| Electrical/electronics | 995 | 1,110 | 1,206 | 1,278 | 1,354 | 1,438 | 1,513 | 1,500 | 1,458 | 1,343 |
| Industrial/manufacturing engineering ² | 162 | 151 | 165 | 196 | 236 | 228 | 284 | 258 | 242 | 227 |
| Materials/metallurgical engineering, total | 380 | 440 | 489 | 485 | 535 | 539 | 588 | 572 | 580 | 565 |
| Ceramic sciences ³ | 35 | 43 | 58 | 42 | 42 | 39 | 39 | 41 | 39 | 24 |
| Materials science | 257 | 307 | 361 | 365 | 416 | 433 | 476 | 470 | 481 | 482 |
| Metallurgical | 88 | 90 | 70 | 78 | 77 | 67 | 73 | 61 | 60 | 59 |
| Mechanical engineering, total | 760 | 884 | 875 | 987 | 1,030 | 1,015 | 1,025 | 1,052 | 1,017 | 1,022 |
| Mechanical | 650 | 773 | 762 | 855 | 902 | 883 | 917 | 947 | 924 | 936 |
| Engineering mechanics | 110 | 111 | 113 | 132 | 128 | 132 | 108 | 105 | 93 | 86 |
| Other engineering, total | 676 | 740 | 807 | 734 | 765 | 728 | 764 | 901 | 849 | 846 |
| Agricultural | 102 | 101 | 83 | 84 | 86 | 89 | 73 | 104 | 79 | 73 |
| Bioengineering/biomedical | 115 | 129 | 149 | 147 | 171 | 173 | 189 | 220 | 210 | 207 |
| Engineering physics | 16 | 16 | 23 | 25 | 21 | 17 | 17 | 37 | 24 | 15 |
| Engineering science | 27 | 37 | 42 | 51 | 55 | 46 | 56 | 52 | 45 | 50 |
| Mining/mineral | 33 | 39 | 38 | 26 | 24 | 23 | 19 | 31 | 33 | 21 |
| Naval architecture/marine ⁴ | 9 | 8 | 5 | N/A |
| Nuclear | 86 | 114 | 107 | 120 | 108 | 85 | 105 | 113 | 102 | 97 |
| Ocean | 20 | 17 | 21 | 21 | 24 | 29 | 21 | 26 | 34 | 29 |
| Operations research | 68 | 46 | 76 | 56 | 56 | 47 | 48 | 74 | 74 | 62 |
| Systems | 30 | 51 | 48 | 37 | 57 | 51 | 47 | 47 | 49 | 68 |
| Engineering, general | 61 | 75 | 78 | 64 | 47 | 39 | 60 | 60 | 51 | 30 |
| Engineering, other | 109 | 107 | 137 | 103 | 116 | 129 | 129 | 137 | 148 | 194 |
| Sciences, total | 17,189 | 17,974 | 18,809 | 19,237 | 19,745 | 20,383 | 20,527 | 20,924 | 21,082 | 21,353 |
| Physical sciences, total | 3,261 | 3,524 | 3,626 | 3,781 | 3,699 | 3,977 | 3,841 | 3,837 | 3,762 | 3,825 |
| Astronomy, total | 113 | 128 | 125 | 134 | 145 | 144 | 173 | 192 | 196 | 208 |
| Astronomy | 49 | 52 | 50 | 55 | 76 | 66 | 89 | 84 | 71 | 91 |
| Astrophysics | 64 | 76 | 75 | 79 | 69 | 78 | 84 | 108 | 125 | 117 |
| Chemistry, total | 1,970 | 2,100 | 2,194 | 2,214 | 2,137 | 2,257 | 2,162 | 2,148 | 2,143 | 2,217 |
| Analytical | 289 | 293 | 304 | 304 | 286 | 334 | 317 | 346 | 350 | 384 |
| Inorganic | 256 | 242 | 260 | 268 | 237 | 262 | 258 | 249 | 277 | 287 |
| Medicinal/ pharmaceutical ⁵ | 64 | 48 | 83 | 69 | 99 | 102 | 96 | 96 | 105 | 115 |
| Nuclear | 6 | 13 | 14 | 7 | 8 | 10 | 5 | 5 | 8 | 5 |
| Organic | 511 | 452 | 538 | 512 | 518 | 544 | 483 | 506 | 564 | 597 |
| Physical | 310 | 325 | 364 | 398 | 336 | 334 | 338 | 300 | 334 | 278 |
| Polymer | 78 | 81 | 111 | 83 | 107 | 117 | 116 | 121 | 110 | 123 |
| Theoretical | 46 | 55 | 45 | 59 | 53 | 52 | 40 | 57 | 48 | 41 |
| Chemistry, general | 312 | 524 | 400 | 449 | 431 | 447 | 458 | 396 | 261 | 286 |
| Chemistry, other | 98 | 67 | 75 | 65 | 62 | 55 | 51 | 72 | 86 | 101 |

See explanatory information, if any, and SOURCE at end of table.

**Table 1. Science and engineering (S&E) doctorates awarded,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Physics, total | 1,161 | 1,265 | 1,286 | 1,403 | 1,399 | 1,548 | 1,479 | 1,484 | 1,401 | 1,376 |
| Acoustics | 15 | 21 | 13 | 18 | 27 | 20 | 18 | 19 | 19 | 18 |
| Chemical & atomic/ molecular ⁶ | 74 | 87 | 76 | 85 | 95 | 140 | 110 | 129 | 106 | 99 |
| Electron ⁴ | 4 | 2 | 1 | N/A |
| Elementary particle | 135 | 163 | 182 | 153 | 170 | 176 | 183 | 175 | 170 | 173 |
| Fluids | 14 | 17 | 14 | 17 | 19 | 12 | 18 | 21 | 24 | 26 |
| Nuclear | 81 | 73 | 66 | 86 | 82 | 90 | 91 | 87 | 106 | 92 |
| Optics | 78 | 76 | 85 | 94 | 96 | 104 | 98 | 129 | 123 | 104 |
| Plasma & high- temperature ⁷ | 61 | 42 | 58 | 65 | 62 | 79 | 46 | 48 | 39 | 55 |
| Polymer | 7 | 11 | 17 | 17 | 29 | 29 | 23 | 33 | 19 | 24 |
| Solid state & low-temperature ⁸ | 296 | 306 | 372 | 408 | 336 | 388 | 371 | 364 | 328 | 313 |
| Physics, general | 269 | 323 | 247 | 297 | 340 | 343 | 355 | 323 | 255 | 190 |
| Physics, other | 127 | 144 | 155 | 163 | 143 | 167 | 166 | 156 | 212 | 282 |
| Other physical sciences | 17 | 31 | 21 | 30 | 18 | 28 | 27 | 13 | 22 | 24 |
| Earth, atmospheric, and ocean sciences, total | 723 | 738 | 815 | 794 | 771 | 824 | 780 | 794 | 875 | 814 |
| Atmospheric sciences, total | 87 | 83 | 108 | 120 | 99 | 129 | 130 | 125 | 148 | 125 |
| Atmospheric dynamics | 16 | 20 | 21 | 23 | 23 | 27 | 16 | 21 | 25 | 24 |
| Atmospheric physics/ chemistry | 15 | 18 | 20 | 36 | 13 | 27 | 27 | 22 | 44 | 38 |
| Meteorology | 27 | 20 | 31 | 28 | 34 | 32 | 25 | 35 | 28 | 25 |
| Atmospheric science/ meteorology, general | 14 | 23 | 26 | 27 | 22 | 37 | 44 | 33 | 36 | 22 |
| Atmospheric science/ meteorology, other | 15 | 2 | 10 | 6 | 7 | 6 | 18 | 14 | 15 | 16 |
| Geosciences, total | 455 | 477 | 560 | 503 | 479 | 509 | 454 | 452 | 487 | 504 |
| Applied geology ⁴ | 6 | 6 | 1 | N/A |
| Geology | 165 | 166 | 192 | 166 | 197 | 194 | 186 | 162 | 164 | 171 |
| Geochemistry | 39 | 56 | 64 | 62 | 50 | 59 | 42 | 49 | 49 | 58 |
| Geomorphology/glacial geology | 10 | 14 | 18 | 12 | 16 | 13 | 11 | 11 | 26 | 20 |
| Geophysics/seismology | 87 | 91 | 117 | 108 | 101 | 106 | 93 | 101 | 108 | 106 |
| Hydrology/water resources | 24 | 13 | 16 | 29 | 25 | 30 | 24 | 31 | 43 | 35 |
| Mineralogy/petrology | 36 | 26 | 36 | 29 | 9 | 21 | 19 | 23 | 18 | 14 |
| Paleontology | 17 | 21 | 24 | 25 | 21 | 17 | 20 | 14 | 23 | 23 |
| Stratigraphy/ sedimentation | 24 | 25 | 29 | 23 | 28 | 27 | 16 | 12 | 23 | 24 |
| Geological & related sciences, general | 19 | 31 | 30 | 18 | 15 | 18 | 21 | 27 | 16 | 13 |
| Geological & related sciences, other | 28 | 28 | 33 | 31 | 17 | 24 | 22 | 22 | 17 | 40 |
| Oceanography, total | 113 | 128 | 112 | 114 | 125 | 125 | 115 | 134 | 144 | 112 |
| Marine sciences | 26 | 39 | 27 | 32 | 27 | 34 | 32 | 27 | 30 | 18 |
| Oceanography | 87 | 89 | 85 | 82 | 98 | 91 | 83 | 107 | 114 | 94 |
| Other environmental sciences | 68 | 50 | 35 | 57 | 68 | 61 | 81 | 83 | 96 | 73 |

See explanatory information, if any, and SOURCE at end of table.

**Table 1. Science and engineering (S&E) doctorates awarded,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Mathematical/computer sciences, total | 1,471 | 1,597 | 1,839 | 1,927 | 2,026 | 2,021 | 2,187 | 2,043 | 2,030 | 2,100 |
| Mathematics, total | 859 | 892 | 1,039 | 1,058 | 1,146 | 1,118 | 1,190 | 1,122 | 1,125 | 1,177 |
| Algebra | 50 | 39 | 72 | 69 | 84 | 78 | 82 | 78 | 78 | 75 |
| Analysis/functional | 103 | 90 | 132 | 105 | 105 | 107 | 99 | 100 | 103 | 130 |
| Applied mathematics | 158 | 185 | 193 | 213 | 188 | 206 | 211 | 230 | 242 | 265 |
| Computing theory | 12 | 12 | 19 | 12 | 18 | 16 | 14 | 18 | 14 | 18 |
| Geometry | 47 | 42 | 66 | 45 | 44 | 35 | 45 | 72 | 70 | 54 |
| Logic | 12 | 19 | 23 | 28 | 19 | 29 | 35 | 16 | 23 | 16 |
| Mathematical statistics ⁹ | 167 | 157 | 206 | 217 | 228 | 205 | 205 | 178 | 181 | 204 |
| Number theory | 23 | 26 | 30 | 25 | 42 | 37 | 35 | 42 | 46 | 46 |
| Operations research | 22 | 29 | 16 | 22 | 37 | 26 | 36 | 21 | 20 | 17 |
| Topology | 37 | 50 | 57 | 58 | 54 | 38 | 51 | 55 | 62 | 65 |
| Mathematics, general | 177 | 191 | 180 | 209 | 276 | 269 | 305 | 233 | 155 | 163 |
| Mathematics, other | 51 | 52 | 45 | 55 | 51 | 72 | 72 | 79 | 131 | 124 |
| Computer sciences, total | 612 | 705 | 800 | 869 | 880 | 903 | 997 | 921 | 905 | 923 |
| Computer science | 519 | 612 | 720 | 791 | 825 | 833 | 913 | 837 | 824 | 817 |
| Information science/ systems | 93 | 93 | 80 | 78 | 55 | 70 | 84 | 84 | 81 | 106 |
| Biological/agricultural sciences, total | 5,202 | 5,502 | 5,723 | 5,862 | 6,060 | 6,281 | 6,412 | 6,760 | 6,755 | 6,883 |
| Biological sciences, total | 4,116 | 4,328 | 4,650 | 4,799 | 5,092 | 5,203 | 5,376 | 5,723 | 5,777 | 5,848 |
| Bacteriology | 11 | 15 | 11 | 13 | 14 | 18 | 13 | 16 | 13 | 13 |
| Biochemistry | 669 | 678 | 765 | 715 | 846 | 804 | 824 | 794 | 830 | 798 |
| Biomedical sciences ¹⁰ | N/A | N/A | N/A | N/A | N/A | N/A | 93 | 140 | 158 | 184 |
| Biophysics | 87 | 103 | 100 | 125 | 103 | 123 | 155 | 142 | 147 | 166 |
| Biotechnology research ¹¹ | N/A | N/A | N/A | N/A | 8 | 14 | 4 | 6 | 11 | 12 |
| Plant genetics | 18 | 31 | 23 | 33 | 41 | 30 | 35 | 41 | 30 | 40 |
| Plant pathology | 22 | 37 | 50 | 32 | 41 | 40 | 32 | 38 | 33 | 18 |
| Plant physiology | 47 | 51 | 65 | 68 | 48 | 70 | 55 | 73 | 47 | 61 |
| Botany, other | 117 | 104 | 105 | 107 | 105 | 117 | 102 | 105 | 91 | 113 |
| Anatomy | 80 | 70 | 77 | 75 | 76 | 66 | 64 | 47 | 50 | 35 |
| Biometrics/biostatistics | 46 | 47 | 59 | 63 | 74 | 72 | 67 | 81 | 84 | 75 |
| Cell biology | 133 | 145 | 149 | 188 | 231 | 237 | 236 | 253 | 250 | 299 |
| Developmental biology/ embryology ² | 10 | 22 | 37 | 48 | 57 | 62 | 64 | 96 | 115 | 127 |
| Ecology | 161 | 166 | 189 | 180 | 177 | 201 | 203 | 245 | 255 | 292 |
| Endocrinology | 21 | 24 | 33 | 27 | 16 | 26 | 20 | 24 | 17 | 30 |
| Entomology | 139 | 147 | 138 | 139 | 114 | 123 | 121 | 136 | 123 | 138 |
| Biological immunology ¹³ | 152 | 153 | 177 | 181 | 169 | 161 | 190 | 238 | 214 | 245 |
| Microbiology | 340 | 335 | 372 | 377 | 433 | 423 | 426 | 444 | 409 | 384 |
| Molecular biology | 413 | 413 | 481 | 527 | 582 | 598 | 617 | 651 | 771 | 741 |
| Neuroscience | 181 | 192 | 238 | 238 | 276 | 284 | 309 | 404 | 435 | 412 |
| Nutritional sciences | 128 | 118 | 106 | 132 | 134 | 147 | 136 | 142 | 124 | 137 |
| Parasitology | 20 | 13 | 20 | 17 | 17 | 22 | 14 | 22 | 17 | 15 |
| Toxicology | 111 | 91 | 86 | 105 | 100 | 120 | 126 | 138 | 180 | 156 |
| Human/animal genetics | 112 | 153 | 160 | 142 | 172 | 203 | 202 | 212 | 217 | 196 |
| Human/animal pathology | 105 | 101 | 122 | 114 | 130 | 128 | 109 | 135 | 106 | 91 |
| Human/animal pharmacology | 242 | 244 | 266 | 279 | 274 | 259 | 278 | 316 | 300 | 256 |
| Human/animal physiology | 272 | 278 | 272 | 266 | 271 | 289 | 262 | 275 | 227 | 258 |
| Zoology, other | 132 | 122 | 125 | 134 | 114 | 117 | 145 | 100 | 96 | 111 |
| Biological sciences, general | 231 | 333 | 278 | 315 | 305 | 288 | 348 | 291 | 208 | 217 |
| Biological sciences, other | 116 | 142 | 146 | 159 | 164 | 161 | 126 | 138 | 219 | 228 |

See explanatory information, if any, and SOURCE at end of table.

**Table 1. Science and engineering (S&E) doctorates awarded,
by field of study and year of doctorate: 1989-98**

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| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------------------------------------|-------|-------|-------|-------|------|-------|-------|-------|------|-------|
| Agricultural sciences, total | 1,086 | 1,174 | 1,073 | 1,063 | 968 | 1,078 | 1,036 | 1,037 | 978 | 1,035 |
| Agronomy & crop science ¹⁴ | 140 | 143 | 117 | 123 | 104 | 143 | 114 | 110 | 77 | 96 |
| Animal breeding/genetics | 23 | 22 | 18 | 23 | 18 | 17 | 19 | 12 | 24 | 18 |
| Animal nutrition | 67 | 54 | 57 | 41 | 52 | 58 | 50 | 54 | 55 | 45 |
| Dairy science | 16 | 20 | 19 | 14 | 11 | 11 | 14 | 9 | 14 | 10 |
| Poultry science | 11 | 17 | 13 | 22 | 16 | 21 | 11 | 12 | 9 | 11 |
| Animal sciences, other | 95 | 90 | 92 | 97 | 74 | 86 | 85 | 90 | 61 | 60 |
| Fisheries science & management ¹⁵ | 34 | 42 | 39 | 26 | 38 | 48 | 49 | 46 | 45 | 30 |
| Wildlife/range management ¹⁶ | 52 | 58 | 59 | 55 | 54 | 52 | 50 | 64 | 50 | 55 |
| Food sciences ¹⁷ | 1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Food engineering ¹⁷ | 11 | 10 | 12 | 14 | 9 | 16 | 7 | 7 | 11 | 13 |
| Food sciences, other ¹⁷ | 147 | 141 | 137 | 151 | 141 | 153 | 135 | 142 | 174 | 153 |
| Forest biology ¹⁸ | 22 | 27 | 17 | 29 | 18 | 20 | 24 | 19 | 22 | 20 |
| Forest engineering ¹⁸ | 1 | 2 | 2 | 2 | 3 | N/A | 4 | 0 | 13 | 2 |
| Forest management ¹⁸ | 21 | 14 | 22 | 16 | 17 | 17 | 20 | 22 | 21 | 27 |
| Wood science & pulp/paper technology ¹⁸ | 16 | 16 | 16 | 21 | 20 | 26 | 26 | 18 | 25 | 25 |
| Conservation/renewable natural resources ¹⁸ | 12 | 16 | 19 | 9 | 13 | 21 | 24 | 13 | 17 | 25 |
| Forestry & related sciences, other ¹⁸ | 57 | 62 | 45 | 62 | 55 | 59 | 71 | 56 | 50 | 69 |
| Horticulture science | 75 | 101 | 78 | 65 | 62 | 65 | 67 | 73 | 44 | 60 |
| Plant breeding/genetics | 64 | 87 | 69 | 82 | 68 | 81 | 72 | 63 | 67 | 69 |
| Plant pathology | 63 | 64 | 90 | 63 | 58 | 55 | 52 | 90 | 65 | 66 |
| Plant protection-pest management ¹⁹ | 6 | 4 | 2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Plant sciences, other | 15 | 23 | 17 | 29 | 28 | 24 | 30 | 21 | 20 | 37 |
| Soil chemistry/ microbiology ²⁰ | 28 | 27 | 24 | 24 | 26 | 21 | 27 | 29 | 32 | 27 |
| Soil sciences, other ²⁰ | 75 | 91 | 78 | 63 | 59 | 69 | 72 | 78 | 56 | 74 |
| Agricultural sciences, general | 7 | 5 | 3 | 9 | 10 | 4 | 6 | 5 | 8 | 8 |
| Agricultural sciences, other | 27 | 38 | 28 | 23 | 14 | 11 | 7 | 4 | 18 | 35 |

See explanatory information, if any, and SOURCE at end of table.

**Table 1. Science and engineering (S&E) doctorates awarded,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Psychology, total | 3,208 | 3,281 | 3,250 | 3,263 | 3,420 | 3,379 | 3,429 | 3,491 | 3,566 | 3,681 |
| Clinical | 1,259 | 1,337 | 1,305 | 1,309 | 1,373 | 1,285 | 1,291 | 1,325 | 1,268 | 1,350 |
| Cognitive psychology & psycholinguistics ²¹ | 79 | 76 | 94 | 101 | 104 | 129 | 104 | 128 | 166 | 113 |
| Comparative | 8 | 8 | 7 | 2 | 5 | 8 | 4 | 3 | 6 | 6 |
| Counseling | 501 | 466 | 497 | 507 | 488 | 497 | 470 | 464 | 487 | 448 |
| Developmental & child ²² | 148 | 159 | 155 | 170 | 202 | 179 | 152 | 188 | 215 | 267 |
| Educational | 105 | 98 | 110 | 91 | 91 | 69 | 74 | 92 | 61 | 61 |
| Experimental | 146 | 143 | 142 | 154 | 143 | 139 | 151 | 128 | 145 | 149 |
| Family & marriage counseling ¹⁰ | N/A | N/A | N/A | N/A | N/A | N/A | 57 | 52 | 64 | 51 |
| Human/individ. & family dev. ²³ | N/A | N/A | N/A | N/A | N/A | 129 | 150 | 151 | 126 | 118 |
| Industrial/organizational | 104 | 126 | 142 | 138 | 159 | 137 | 155 | 162 | 185 | 189 |
| Physiological/ psychobiology ²⁴ | 62 | 46 | 45 | 55 | 85 | 93 | 92 | 80 | 77 | 92 |
| Quantitative | 11 | 15 | 7 | 10 | 16 | 17 | 13 | 19 | 17 | 15 |
| Personality | 28 | 20 | 13 | 17 | 22 | 19 | 16 | 24 | 25 | 24 |
| Psychometrics | 6 | 8 | 9 | 5 | 9 | 5 | 10 | 11 | 11 | 8 |
| School | 107 | 82 | 82 | 88 | 95 | 84 | 91 | 82 | 84 | 106 |
| Social | 128 | 145 | 147 | 139 | 125 | 153 | 155 | 170 | 181 | 186 |
| Psychology, general | 364 | 371 | 324 | 295 | 306 | 280 | 306 | 279 | 319 | 302 |
| Psychology, other | 152 | 181 | 171 | 182 | 197 | 285 | 288 | 284 | 129 | 196 |
| Social sciences, total | 3,324 | 3,332 | 3,556 | 3,610 | 3,769 | 3,901 | 3,878 | 3,999 | 4,094 | 4,050 |
| Economics, total | 1,062 | 1,007 | 1,053 | 1,051 | 1,067 | 1,101 | 1,152 | 1,177 | 1,161 | 1,153 |
| Agricultural economics | 164 | 145 | 168 | 141 | 137 | 162 | 173 | 169 | 133 | 155 |
| Econometrics | 26 | 26 | 24 | 25 | 24 | 26 | 27 | 29 | 31 | 25 |
| Economics | 872 | 836 | 861 | 885 | 906 | 913 | 952 | 979 | 997 | 973 |
| Political science, total | 700 | 734 | 740 | 804 | 824 | 930 | 894 | 928 | 970 | 961 |
| International relations & affairs ²⁵ | 94 | 97 | 88 | 76 | 102 | 112 | 73 | 99 | 88 | 97 |
| Political science/ government | 430 | 462 | 434 | 513 | 507 | 589 | 600 | 621 | 661 | 662 |
| Public administration | 97 | 88 | 107 | 108 | 117 | 135 | 128 | 104 | 95 | 105 |
| Public policy analysis ²⁶ | 79 | 87 | 111 | 107 | 98 | 94 | 93 | 104 | 126 | 97 |
| Sociology, total | 458 | 448 | 493 | 512 | 535 | 548 | 555 | 527 | 598 | 580 |
| Demography/population studies ²⁷ | 22 | 20 | 28 | 17 | 22 | 23 | 15 | 11 | 24 | 31 |
| Sociology | 436 | 428 | 465 | 495 | 513 | 525 | 540 | 516 | 574 | 549 |
| Other social sciences, total | 1,104 | 1,143 | 1,270 | 1,243 | 1,343 | 1,322 | 1,277 | 1,367 | 1,365 | 1,356 |
| American studies | 76 | 72 | 92 | 81 | 101 | 88 | 94 | 115 | 82 | 100 |
| Anthropology | 325 | 324 | 341 | 320 | 342 | 384 | 375 | 396 | 431 | 425 |
| Archaeology | 26 | 22 | 33 | 33 | 38 | 34 | 35 | 21 | 35 | 34 |
| Area studies | 17 | 22 | 24 | 33 | 36 | 34 | 27 | 28 | 10 | 14 |
| Criminology | 32 | 42 | 35 | 37 | 39 | 41 | 44 | 60 | 49 | 55 |
| Geography | 105 | 131 | 108 | 111 | 137 | 146 | 150 | 165 | 149 | 154 |
| History/philosophy of science & technology ²⁸ | 20 | 26 | 27 | 28 | 37 | 27 | 41 | 37 | 34 | 43 |
| Linguistics | 188 | 167 | 227 | 266 | 214 | 221 | 201 | 230 | 244 | 219 |
| Statistics | 69 | 69 | 31 | 29 | 48 | 46 | 48 | 48 | 56 | 60 |
| Urban affairs & studies ²⁹ | 62 | 67 | 90 | 86 | 123 | 132 | 103 | 106 | 92 | 75 |
| Social sciences, general | 26 | 23 | 36 | 33 | 32 | 21 | 35 | 26 | 26 | 30 |
| Social sciences, other | 158 | 178 | 226 | 186 | 196 | 148 | 124 | 135 | 157 | 147 |

See explanatory information, if any, and SOURCE at end of table.

**Table 1. Science and engineering (S&E) doctorates awarded,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Non-S&E, total ³⁰ | 12,595 | 13,199 | 13,511 | 14,215 | 14,358 | 14,829 | 15,208 | 15,185 | 15,375 | 15,411 |
| Health | 974 | 956 | 1,041 | 1,112 | 1,197 | 1,296 | 1,330 | 1,324 | 1,422 | 1,500 |
| Humanities ³¹ | 3,242 | 3,535 | 3,720 | 4,036 | 4,092 | 4,374 | 4,690 | 4,713 | 5,029 | 5,103 |
| Education | 6,281 | 6,510 | 6,454 | 6,677 | 6,689 | 6,708 | 6,649 | 6,772 | 6,549 | 6,559 |
| Professional/other | 2,098 | 2,198 | 2,296 | 2,390 | 2,380 | 2,451 | 2,539 | 2,376 | 2,375 | 2,249 |
| Grand total, all fields | 34,327 | 36,067 | 37,534 | 38,890 | 39,801 | 41,034 | 41,743 | 42,414 | 42,555 | 42,683 |

- 1 In 1993 this subfield was changed from "Polymer engineering" to "Polymer and plastics engineering."
- 2 In 1993 this subfield was changed from "Industrial engineering" to "Industrial and manufacturing engineering."
- 3 In 1993 this subfield was changed from "Ceramic engineering" to "Ceramic sciences engineering."
- 4 These subfields were deleted in 1991: "Naval architecture/marine engineering," "Electron physics," and "Applied geology."
- 5 In 1993 this subfield was changed from "Pharmaceutical chemistry" to "Medicinal and pharmaceutical chemistry."
- 6 In 1993 this subfield was changed from "Atomic/molecular physics" to "Chemical and atomic/molecular physics."
- 7 In 1993 this subfield was changed from "Plasma physics" to "Plasma and high-temperature physics."
- 8 In 1993 this subfield was changed from "Solid state physics" to "Solid state and low-temperature physics."
- 9 In 1993 this subfield was changed from "Math probability and statistics" to "Mathematical statistics."
- 10 These subfields were introduced in 1995: "Biomedical sciences" and "Family and marriage counseling."
- 11 "Biotechnology research" was introduced in 1993.
- 12 In 1990 this subfield was changed from "Embryology" to "Developmental biology/embryology."
- 13 In 1993 this subfield was changed from "Immunology" to "Biological immunology."
- 14 In 1993 this subfield was changed from "Agronomy" to "Agronomy and crop science."
- 15 In 1993 this subfield was changed from "Fisheries science" to "Fisheries science and management."
- 16 In 1988 this subfield was changed from "Wildlife management" to "Wildlife/range management."
- 17 In 1990 "Food sciences" was separated into "Food engineering" and "Food sciences, other."
- 18 In 1988 "Forestry science" was separated into "Forest biology," "Forest engineering," "Forest management," "Wood science," "Renewable natural resources," and "Forestry and related sciences, other." In 1993 "Pulp and paper technology" was added to "Wood science," and "Conservation" was added to "Renewable natural resources." "Forest engineering" was deleted from the survey in 1994 and reintroduced in 1995.
- 19 "Plant protection-pest management" was deleted in 1991.
- 20 In 1988 "Soil sciences" was separated into "Soil chemistry/microbiology" and "Soil sciences, other."
- 21 In 1993 this subfield was changed from "Cognitive psychology" to "Cognitive psychology and psycholinguistics."
- 22 In 1993 this subfield was changed from "Developmental psychology" to "Developmental and child psychology."
- 23 "Human/individual & family development" was introduced in 1994.
- 24 In 1993 this subfield was changed from "Physiological psychology" to "Physiological psychology/psychobiology."
- 25 In 1993 this subfield was changed from "International relations" to "International relations and affairs."
- 26 In 1993 this subfield was changed from "Public policy studies" to "Public policy analysis."
- 27 In 1993 this subfield was changed from "Demography" to "Demography and population studies."
- 28 In 1993 this subfield was changed from "History of science" to "History and philosophy of science and technology."
- 29 In 1993 this subfield was changed from "Urban studies" to "Urban affairs and studies."
- 30 Non-S&E doctorates include those whose field of specialization is unknown.
- 31 Categories differ from those published by other Federal sponsors and the Summary Reports in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

KEY: N/A = Not available (i.e., the subfield was not identified separately in the questionnaire for that year)

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

**Table 2. Science and engineering (S&E) doctorates awarded to women,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | Percent women | |
|---------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------------------|-------|
| | | | | | | | | | | | 1989 | 1998 |
| | | | | | | | | | | | Science and engineering, total | 6,109 |
| Engineering, total | 375 | 415 | 467 | 506 | 522 | 635 | 696 | 776 | 747 | 769 | 8.3 | 13.0 |
| Aeronautical/astronautical engineering | 8 | 4 | 7 | 8 | 8 | 11 | 14 | 24 | 16 | 14 | 4.5 | 5.8 |
| Chemical engineering, total | 80 | 78 | 83 | 113 | 94 | 113 | 109 | 143 | 122 | 140 | 11.2 | 18.1 |
| Chemical | 74 | 71 | 75 | 101 | 83 | 101 | 96 | 126 | 106 | 119 | 11.8 | 17.8 |
| Petroleum | 1 | 0 | 1 | 3 | 5 | 3 | 1 | 3 | 3 | 6 | 3.4 | 12.5 |
| Polymer/plastics ¹ | 5 | 7 | 7 | 9 | 6 | 9 | 12 | 14 | 13 | 15 | 8.6 | 25.4 |
| Civil engineering, total | 54 | 49 | 41 | 50 | 54 | 80 | 76 | 79 | 80 | 100 | 10.0 | 15.4 |
| Civil | 45 | 39 | 31 | 36 | 45 | 56 | 55 | 64 | 70 | 83 | 9.0 | 14.1 |
| Environmental health | 9 | 10 | 10 | 14 | 9 | 24 | 21 | 15 | 10 | 17 | 22.5 | 27.0 |
| Electrical engineering, total | 67 | 84 | 79 | 115 | 125 | 147 | 173 | 169 | 150 | 155 | 5.9 | 9.7 |
| Communications | 1 | 2 | 2 | 1 | 2 | 5 | 5 | 2 | 3 | 6 | 4.0 | 15.0 |
| Computer | 12 | 11 | 9 | 13 | 15 | 25 | 18 | 23 | 21 | 22 | 10.3 | 10.5 |
| Electrical/electronics | 54 | 71 | 68 | 101 | 108 | 117 | 150 | 144 | 126 | 127 | 5.4 | 9.5 |
| Industrial/manufacturing engineering ² | 18 | 25 | 17 | 25 | 27 | 33 | 50 | 51 | 37 | 39 | 11.1 | 17.2 |
| Materials/metallurgical engineering, total | 45 | 49 | 77 | 61 | 78 | 83 | 95 | 83 | 106 | 84 | 11.8 | 14.9 |
| Ceramic sciences ³ | 4 | 11 | 10 | 9 | 6 | 9 | 5 | 3 | 8 | 2 | 11.4 | 8.3 |
| Materials science | 35 | 31 | 59 | 50 | 67 | 69 | 84 | 71 | 96 | 75 | 13.6 | 15.6 |
| Metallurgical | 6 | 7 | 8 | 2 | 5 | 5 | 6 | 9 | 2 | 7 | 6.8 | 11.9 |
| Mechanical engineering, total | 29 | 38 | 57 | 45 | 57 | 69 | 64 | 78 | 88 | 92 | 3.8 | 9.0 |
| Mechanical | 22 | 29 | 50 | 33 | 46 | 60 | 56 | 68 | 82 | 79 | 3.4 | 8.4 |
| Engineering mechanics | 7 | 9 | 7 | 12 | 11 | 9 | 8 | 10 | 6 | 13 | 6.4 | 15.1 |
| Other engineering, total | 74 | 88 | 106 | 89 | 79 | 99 | 115 | 149 | 148 | 145 | 10.9 | 17.1 |
| Agricultural | 6 | 7 | 8 | 6 | 6 | 10 | 7 | 17 | 12 | 5 | 5.9 | 6.8 |
| Bioengineering/biomedical | 26 | 23 | 27 | 33 | 31 | 45 | 48 | 49 | 53 | 50 | 22.6 | 24.2 |
| Engineering physics | 0 | 1 | 2 | 2 | 3 | 3 | 1 | 3 | 4 | 3 | .0 | 20.0 |
| Engineering science | 3 | 6 | 3 | 6 | 3 | 3 | 6 | 4 | 7 | 8 | 11.1 | 16.0 |
| Mining/mineral | 4 | 2 | 6 | 3 | 1 | 3 | 0 | 3 | 3 | 4 | 12.1 | 19.0 |
| Naval architecture/marine ⁴ | 1 | 1 | 0 | N/A | 11.1 | - |
| Nuclear | 7 | 9 | 6 | 9 | 5 | 8 | 9 | 9 | 8 | 10 | 8.1 | 10.3 |
| Ocean | 2 | 2 | 1 | 0 | 1 | 2 | 3 | 3 | 5 | 0 | 10.0 | .0 |
| Operations research | 14 | 6 | 22 | 11 | 10 | 7 | 8 | 16 | 15 | 15 | 20.6 | 24.2 |
| Systems | 3 | 3 | 4 | 3 | 4 | 5 | 5 | 9 | 10 | 9 | 10.0 | 13.2 |
| Engineering, general | 2 | 10 | 7 | 3 | 3 | 4 | 9 | 11 | 3 | 3 | 3.3 | 10.0 |
| Engineering, other | 6 | 18 | 20 | 13 | 12 | 9 | 19 | 25 | 28 | 38 | 5.5 | 19.6 |
| Sciences, total | 5,734 | 5,955 | 6,465 | 6,574 | 7,130 | 7,285 | 7,592 | 7,870 | 8,174 | 8,573 | 33.4 | 40.1 |
| Physical sciences, total | 619 | 661 | 679 | 770 | 780 | 828 | 878 | 842 | 850 | 927 | 19.0 | 24.2 |
| Astronomy, total | 17 | 20 | 14 | 19 | 25 | 25 | 30 | 41 | 36 | 46 | 15.0 | 22.1 |
| Astronomy | 8 | 13 | 7 | 11 | 12 | 9 | 18 | 21 | 18 | 22 | 16.3 | 24.2 |
| Astrophysics | 9 | 7 | 7 | 8 | 13 | 16 | 12 | 20 | 18 | 24 | 14.1 | 20.5 |
| Chemistry, total | 499 | 503 | 517 | 579 | 582 | 625 | 661 | 605 | 612 | 695 | 25.3 | 31.3 |
| Analytical | 63 | 68 | 83 | 95 | 91 | 102 | 109 | 111 | 106 | 146 | 21.8 | 38.0 |
| Inorganic | 74 | 60 | 73 | 69 | 59 | 87 | 92 | 68 | 81 | 84 | 28.9 | 29.3 |
| Medicinal/ pharmaceutical ⁵ | 21 | 20 | 27 | 27 | 38 | 26 | 32 | 32 | 43 | 46 | 32.8 | 40.0 |
| Nuclear | 0 | 2 | 4 | 1 | 0 | 0 | 3 | 0 | 0 | 1 | .0 | 20.0 |
| Organic | 105 | 104 | 108 | 119 | 131 | 128 | 134 | 118 | 144 | 160 | 20.5 | 26.8 |
| Physical | 87 | 76 | 86 | 109 | 88 | 93 | 93 | 85 | 91 | 77 | 28.1 | 27.7 |
| Polymer | 15 | 13 | 24 | 12 | 22 | 23 | 28 | 30 | 25 | 40 | 19.2 | 32.5 |
| Theoretical | 9 | 14 | 7 | 16 | 16 | 17 | 10 | 14 | 11 | 10 | 19.6 | 24.4 |
| Chemistry, general | 91 | 128 | 76 | 107 | 112 | 126 | 135 | 119 | 76 | 88 | 29.2 | 30.8 |
| Chemistry, other | 34 | 18 | 29 | 24 | 25 | 23 | 25 | 28 | 35 | 43 | 34.7 | 42.6 |

See explanatory information, if any, and SOURCE at end of table.

**Table 2. Science and engineering (S&E) doctorates awarded to women,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | Percent women | |
|--------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|---------------|------|
| | | | | | | | | | | | 1989 | 1998 |
| Physics, total | 101 | 130 | 142 | 167 | 169 | 175 | 182 | 193 | 193 | 177 | 8.7 | 12.9 |
| Acoustics | 0 | 2 | 2 | 0 | 1 | 2 | 3 | 2 | 4 | 6 | .0 | 33.3 |
| Chemical & atomic/ molecular ⁶ | 8 | 7 | 4 | 6 | 14 | 17 | 15 | 10 | 11 | 13 | 10.8 | 13.1 |
| Electron ⁴ | 0 | 0 | 0 | N/A | .0 | - |
| Elementary particle | 10 | 14 | 20 | 12 | 18 | 16 | 7 | 19 | 21 | 11 | 7.4 | 6.4 |
| Fluids | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 4 | 0 | 0 | 7.1 | .0 |
| Nuclear | 8 | 5 | 7 | 12 | 8 | 9 | 12 | 9 | 11 | 11 | 9.9 | 12.0 |
| Optics | 7 | 5 | 13 | 9 | 14 | 14 | 13 | 20 | 16 | 18 | 9.0 | 17.3 |
| Plasma & high- temperature ⁷ | 4 | 2 | 2 | 4 | 4 | 8 | 5 | 2 | 2 | 2 | 6.6 | 3.6 |
| Polymer | 1 | 3 | 3 | 1 | 5 | 4 | 3 | 12 | 7 | 4 | 14.3 | 16.7 |
| Solid state & low-temperature ⁸ | 23 | 35 | 42 | 53 | 42 | 53 | 57 | 54 | 51 | 37 | 7.8 | 11.8 |
| Physics, general | 19 | 33 | 31 | 42 | 46 | 30 | 41 | 39 | 36 | 29 | 7.1 | 15.3 |
| Physics, other | 20 | 23 | 18 | 27 | 15 | 21 | 26 | 22 | 34 | 46 | 15.7 | 16.3 |
| Other physical sciences | 2 | 8 | 6 | 5 | 4 | 3 | 5 | 3 | 9 | 9 | 11.8 | 37.5 |
| Earth, atmospheric, and ocean sciences, total | 148 | 141 | 179 | 188 | 160 | 183 | 170 | 172 | 209 | 219 | 20.5 | 26.9 |
| Atmospheric sciences, total | 10 | 14 | 16 | 27 | 18 | 26 | 23 | 22 | 25 | 30 | 11.5 | 24.0 |
| Atmospheric dynamics | 2 | 4 | 3 | 4 | 5 | 9 | 3 | 4 | 5 | 8 | 12.5 | 33.3 |
| Atmospheric physics/ chemistry | 2 | 1 | 2 | 5 | 2 | 5 | 8 | 7 | 10 | 7 | 13.3 | 18.4 |
| Meteorology | 0 | 3 | 7 | 10 | 3 | 8 | 3 | 2 | 3 | 5 | .0 | 20.0 |
| Atmospheric science/ meteorology, general | 3 | 5 | 3 | 7 | 7 | 4 | 7 | 5 | 5 | 8 | 21.4 | 36.4 |
| Atmospheric science/ meteorology, other | 3 | 1 | 1 | 1 | 1 | 0 | 2 | 4 | 2 | 2 | 20.0 | 12.5 |
| Geosciences, total | 92 | 85 | 124 | 115 | 89 | 95 | 91 | 88 | 118 | 127 | 20.2 | 25.2 |
| Applied geology ⁴ | 0 | 3 | 0 | N/A | .0 | - |
| Geology | 35 | 32 | 34 | 35 | 35 | 32 | 38 | 36 | 38 | 40 | 21.2 | 23.4 |
| Geochemistry | 13 | 9 | 19 | 16 | 13 | 10 | 10 | 10 | 15 | 22 | 33.3 | 37.9 |
| Geomorphology/glacial geology | 3 | 1 | 2 | 5 | 3 | 2 | 4 | 1 | 4 | 8 | 30.0 | 40.0 |
| Geophysics/seismology | 11 | 15 | 20 | 23 | 14 | 24 | 19 | 14 | 19 | 21 | 12.6 | 19.8 |
| Hydrology/water resources | 2 | 1 | 2 | 7 | 9 | 3 | 4 | 5 | 8 | 8 | 8.3 | 22.9 |
| Mineralogy/petrology | 5 | 4 | 15 | 6 | 1 | 6 | 4 | 11 | 6 | 5 | 13.9 | 35.7 |
| Paleontology | 4 | 2 | 7 | 2 | 5 | 2 | 3 | 4 | 11 | 7 | 23.5 | 30.4 |
| Stratigraphy/ sedimentation | 6 | 5 | 8 | 10 | 5 | 4 | 1 | 3 | 7 | 4 | 25.0 | 16.7 |
| Geological & related sciences, general | 2 | 5 | 9 | 4 | 2 | 1 | 4 | 2 | 4 | 5 | 10.5 | 38.5 |
| Geological & related sciences, other | 11 | 8 | 8 | 7 | 2 | 11 | 4 | 2 | 6 | 7 | 39.3 | 17.5 |
| Oceanography, total | 26 | 31 | 26 | 29 | 35 | 38 | 28 | 39 | 38 | 32 | 23.0 | 28.6 |
| Marine sciences | 6 | 7 | 2 | 11 | 8 | 11 | 8 | 5 | 8 | 3 | 23.1 | 16.7 |
| Oceanography | 20 | 24 | 24 | 18 | 27 | 27 | 20 | 34 | 30 | 29 | 23.0 | 30.9 |
| Other environmental sciences | 20 | 11 | 13 | 17 | 18 | 24 | 28 | 23 | 28 | 30 | 29.4 | 41.1 |

See explanatory information, if any, and SOURCE at end of table.

**Table 2. Science and engineering (S&E) doctorates awarded to women,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | Percent women | | |
|-----------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|------|------|
| | | | | | | | | | | | 1989 | 1998 | |
| Mathematical/computer sciences, total | 263 | 268 | 316 | 325 | 402 | 373 | 451 | 370 | 412 | 454 | 17.9 | 21.6 | |
| Mathematics, total | 155 | 158 | 199 | 205 | 264 | 236 | 265 | 231 | 263 | 297 | 18.0 | 25.2 | |
| Algebra | 10 | 6 | 16 | 13 | 28 | 24 | 24 | 18 | 20 | 18 | 20.0 | 24.0 | |
| Analysis/functional analysis | 20 | 15 | 21 | 18 | 23 | 16 | 18 | 15 | 13 | 25 | 19.4 | 19.2 | |
| Applied mathematics | 28 | 34 | 27 | 44 | 43 | 39 | 47 | 52 | 55 | 61 | 17.7 | 23.0 | |
| Computing theory | 1 | 1 | 3 | 0 | 3 | 2 | 2 | 2 | 1 | 3 | 8.3 | 16.7 | |
| Geometry | 7 | 8 | 5 | 6 | 7 | 4 | 8 | 14 | 13 | 15 | 14.9 | 27.8 | |
| Logic | 5 | 3 | 1 | 2 | 4 | 6 | 7 | 1 | 5 | 5 | 41.7 | 31.3 | |
| Mathematical statistics ⁹ | 38 | 31 | 56 | 46 | 57 | 50 | 54 | 47 | 46 | 62 | 22.8 | 30.4 | |
| Number theory | 5 | 1 | 8 | 4 | 4 | 5 | 9 | 7 | 11 | 7 | 21.7 | 15.2 | |
| Operations research | 4 | 2 | 4 | 6 | 9 | 9 | 5 | 4 | 5 | 6 | 18.2 | 35.3 | |
| Topology | 8 | 11 | 18 | 16 | 9 | 11 | 8 | 5 | 14 | 13 | 21.6 | 20.0 | |
| Mathematics, general | 17 | 32 | 31 | 37 | 56 | 54 | 64 | 45 | 44 | 39 | 9.6 | 23.9 | |
| Mathematics, other | 12 | 14 | 9 | 13 | 21 | 16 | 19 | 21 | 36 | 43 | 23.5 | 34.7 | |
| Computer sciences, total | 108 | 110 | 117 | 120 | 138 | 137 | 186 | 139 | 149 | 157 | 17.6 | 17.0 | |
| Computer science | 69 | 85 | 96 | 91 | 123 | 118 | 160 | 116 | 131 | 118 | 13.3 | 14.4 | |
| Information science/systems | 39 | 25 | 21 | 29 | 15 | 19 | 26 | 23 | 18 | 39 | 41.9 | 36.8 | |
| Biological/agricultural sciences, total | 1,769 | 1,861 | 1,982 | 2,064 | 2,278 | 2,357 | 2,446 | 2,697 | 2,749 | 2,830 | 34.0 | 41.1 | |
| Biological sciences, total | 1,542 | 1,615 | 1,773 | 1,831 | 2,050 | 2,108 | 2,218 | 2,415 | 2,491 | 2,533 | 37.5 | 43.3 | |
| Bacteriology | 2 | 4 | 5 | 5 | 6 | 11 | 6 | 8 | 1 | 4 | 18.2 | 30.8 | |
| Biochemistry | 268 | 237 | 289 | 284 | 318 | 320 | 341 | 317 | 364 | 349 | 40.1 | 43.7 | |
| Biomedical sciences ¹⁰ | N/A | 42 | 54 | 63 | 79 | - | 42.9 |
| Biophysics | 21 | 23 | 26 | 33 | 21 | 33 | 46 | 41 | 41 | 47 | 24.1 | 28.3 | |
| Biotechnology research ¹¹ | N/A | N/A | N/A | N/A | 4 | 2 | 2 | 1 | 3 | 4 | - | 33.3 | |
| Plant genetics | 3 | 7 | 5 | 8 | 12 | 5 | 12 | 16 | 11 | 18 | 16.7 | 45.0 | |
| Plant pathology | 8 | 12 | 13 | 10 | 15 | 11 | 10 | 13 | 8 | 8 | 36.4 | 44.4 | |
| Plant physiology | 15 | 19 | 19 | 16 | 19 | 21 | 21 | 29 | 18 | 28 | 31.9 | 45.9 | |
| Botany, other | 52 | 33 | 39 | 45 | 43 | 46 | 34 | 44 | 31 | 55 | 44.4 | 48.7 | |
| Anatomy | 27 | 29 | 31 | 31 | 34 | 29 | 25 | 20 | 19 | 8 | 33.7 | 22.9 | |
| Biometrics/biostatistics | 20 | 18 | 29 | 24 | 21 | 33 | 23 | 34 | 43 | 39 | 43.5 | 52.0 | |
| Cell biology | 57 | 69 | 63 | 80 | 116 | 102 | 117 | 107 | 113 | 154 | 42.9 | 51.5 | |
| Developmental biology/embryology ² | 4 | 12 | 20 | 22 | 25 | 32 | 30 | 49 | 61 | 61 | 40.0 | 48.0 | |
| Ecology | 36 | 52 | 60 | 65 | 67 | 70 | 64 | 84 | 108 | 114 | 22.4 | 39.0 | |
| Endocrinology | 10 | 11 | 16 | 12 | 12 | 8 | 6 | 13 | 9 | 14 | 47.6 | 46.7 | |
| Entomology | 23 | 26 | 35 | 35 | 28 | 28 | 27 | 36 | 41 | 37 | 16.5 | 26.8 | |
| Biological immunology ¹³ | 61 | 72 | 76 | 83 | 73 | 74 | 82 | 129 | 93 | 115 | 40.1 | 46.9 | |
| Microbiology | 124 | 116 | 150 | 157 | 183 | 177 | 188 | 185 | 184 | 169 | 36.5 | 44.0 | |
| Molecular biology | 153 | 152 | 182 | 194 | 237 | 268 | 265 | 291 | 330 | 324 | 37.0 | 43.7 | |
| Neuroscience | 63 | 76 | 88 | 92 | 110 | 129 | 121 | 165 | 189 | 168 | 34.8 | 40.8 | |
| Nutritional sciences | 91 | 88 | 70 | 95 | 99 | 102 | 92 | 98 | 92 | 95 | 71.1 | 69.3 | |
| Parasitology | 5 | 4 | 7 | 8 | 7 | 9 | 7 | 12 | 10 | 6 | 25.0 | 40.0 | |
| Toxicology | 39 | 36 | 30 | 33 | 43 | 50 | 50 | 60 | 80 | 61 | 35.1 | 39.1 | |
| Human/animal genetics | 57 | 73 | 71 | 61 | 76 | 87 | 92 | 101 | 103 | 91 | 50.9 | 46.4 | |
| Human/animal pathology | 41 | 32 | 46 | 41 | 45 | 45 | 38 | 52 | 42 | 35 | 39.0 | 38.5 | |
| Human/animal pharmacology | 99 | 92 | 91 | 92 | 121 | 106 | 129 | 142 | 143 | 121 | 40.9 | 47.3 | |
| Human/animal physiology | 105 | 98 | 107 | 82 | 100 | 106 | 103 | 107 | 82 | 100 | 38.6 | 38.8 | |
| Zoology, other | 35 | 37 | 39 | 45 | 32 | 32 | 50 | 31 | 34 | 43 | 26.5 | 38.7 | |
| Biological sciences, general | 77 | 140 | 113 | 115 | 113 | 117 | 148 | 120 | 86 | 82 | 33.3 | 37.8 | |
| Biological sciences, other | 46 | 47 | 53 | 63 | 70 | 55 | 47 | 56 | 89 | 104 | 39.7 | 45.6 | |

See explanatory information, if any, and SOURCE at end of table.

**Table 2. Science and engineering (S&E) doctorates awarded to women,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | Percent women | |
|-----------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|---------------------------------------|------|
| | | | | | | | | | | | 1989 | 1998 |
| | | | | | | | | | | | Agricultural sciences, total | 227 |
| Agronomy & crop science ¹⁴ | 20 | 21 | 11 | 23 | 19 | 17 | 13 | 17 | 10 | 18 | 14.3 | 18.8 |
| Animal breeding/genetics | 3 | 3 | 2 | 6 | 4 | 3 | 1 | 3 | 4 | 6 | 13.0 | 33.3 |
| Animal nutrition | 15 | 13 | 10 | 8 | 7 | 10 | 9 | 11 | 13 | 13 | 22.4 | 28.9 |
| Dairy science | 1 | 2 | 4 | 2 | 2 | 1 | 3 | 2 | 5 | 2 | 6.3 | 20.0 |
| Poultry science | 2 | 3 | 1 | 6 | 6 | 5 | 0 | 3 | 2 | 3 | 18.2 | 27.3 |
| Animal sciences, other | 25 | 11 | 20 | 21 | 19 | 25 | 19 | 26 | 13 | 16 | 26.3 | 26.7 |
| Fisheries science & management ¹⁵ | 5 | 6 | 4 | 1 | 4 | 11 | 9 | 10 | 5 | 8 | 14.7 | 26.7 |
| Wildlife/range management ¹⁶ | 10 | 6 | 8 | 7 | 17 | 13 | 8 | 22 | 13 | 14 | 19.2 | 25.5 |
| Food sciences ¹⁷ | 0 | N/A | .0 | - |
| Food engineering ¹⁷ | 1 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 3 | 3 | 9.1 | 23.1 |
| Food sciences, other ¹⁷ | 53 | 54 | 46 | 60 | 57 | 69 | 54 | 69 | 79 | 66 | 36.1 | 43.1 |
| Forest biology ¹⁸ | 3 | 8 | 3 | 8 | 7 | 6 | 5 | 4 | 1 | 6 | 13.6 | 30.0 |
| Forest engineering ¹⁸ | 0 | 0 | 1 | 0 | 0 | N/A | 0 | 0 | 2 | 0 | .0 | .0 |
| Forest management ¹⁸ | 2 | 1 | 4 | 1 | 0 | 2 | 6 | 2 | 4 | 9 | 9.5 | 33.3 |
| Wood science & pulp/paper technology ¹⁸ | 0 | 0 | 2 | 2 | 3 | 6 | 6 | 3 | 2 | 4 | .0 | 16.0 |
| Conservation/renewable natural resources ¹⁸ | 1 | 3 | 3 | 1 | 4 | 6 | 5 | 3 | 7 | 11 | 8.3 | 44.0 |
| Forestry & related sciences, other ¹⁸ | 8 | 10 | 5 | 9 | 9 | 6 | 13 | 18 | 15 | 16 | 14.0 | 23.2 |
| Horticulture science | 19 | 27 | 19 | 16 | 15 | 14 | 22 | 22 | 16 | 13 | 25.3 | 21.7 |
| Plant breeding/genetics | 13 | 20 | 10 | 12 | 14 | 13 | 15 | 13 | 9 | 14 | 20.3 | 20.3 |
| Plant pathology | 24 | 25 | 26 | 20 | 15 | 20 | 9 | 27 | 26 | 24 | 38.1 | 36.4 |
| Plant protection-pest management ¹⁹ | 0 | 1 | 0 | N/A | .0 | - |
| Plant sciences, other | 4 | 4 | 4 | 6 | 9 | 9 | 3 | 3 | 7 | 14 | 26.7 | 37.8 |
| Soil chemistry/ microbiology ²⁰ | 7 | 6 | 6 | 3 | 5 | 4 | 5 | 9 | 9 | 7 | 25.0 | 25.9 |
| Soil sciences, other ²⁰ | 7 | 8 | 11 | 12 | 4 | 6 | 18 | 14 | 8 | 21 | 9.3 | 28.4 |
| Agricultural sciences, general | 2 | 0 | 1 | 2 | 2 | 0 | 3 | 0 | 1 | 1 | 28.6 | 12.5 |
| Agricultural sciences, other | 2 | 12 | 6 | 5 | 4 | 1 | 2 | 1 | 4 | 8 | 7.4 | 22.9 |

See explanatory information, if any, and SOURCE at end of table.

**Table 2. Science and engineering (S&E) doctorates awarded to women,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | Percent women | |
|-------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|------|
| | | | | | | | | | | | 1989 | 1998 |
| Psychology, total | 1,800 | 1,913 | 1,996 | 1,928 | 2,088 | 2,101 | 2,180 | 2,328 | 2,369 | 2,460 | 56.1 | 66.8 |
| Clinical | 710 | 785 | 848 | 810 | 873 | 842 | 870 | 919 | 903 | 969 | 56.4 | 71.8 |
| Cognitive psychology & psycholinguistics ²¹ | 33 | 35 | 46 | 47 | 48 | 56 | 52 | 60 | 75 | 50 | 41.8 | 44.2 |
| Comparative | 1 | 3 | 5 | 2 | 3 | 7 | 1 | 2 | 3 | 4 | 12.5 | 66.7 |
| Counseling | 284 | 281 | 306 | 289 | 284 | 310 | 297 | 303 | 313 | 295 | 56.7 | 65.8 |
| Developmental & child ²² | 116 | 112 | 119 | 131 | 155 | 132 | 121 | 154 | 170 | 207 | 78.4 | 77.5 |
| Educational | 60 | 69 | 64 | 69 | 67 | 39 | 53 | 66 | 45 | 39 | 57.1 | 63.9 |
| Experimental | 70 | 49 | 64 | 73 | 68 | 71 | 83 | 68 | 70 | 65 | 47.9 | 43.6 |
| Family & marriage counseling ¹⁰ | N/A | N/A | N/A | N/A | N/A | N/A | 37 | 28 | 43 | 28 | - | 54.9 |
| Human/individ. & family dev. ²³ | N/A | N/A | N/A | N/A | N/A | 103 | 118 | 121 | 101 | 90 | - | 76.3 |
| Industrial/organizational | 49 | 53 | 76 | 64 | 73 | 69 | 89 | 99 | 103 | 110 | 47.1 | 58.2 |
| Physiological/ psychobiology ²⁴ | 33 | 28 | 21 | 25 | 50 | 52 | 35 | 41 | 42 | 49 | 53.2 | 53.3 |
| Quantitative | 6 | 3 | 2 | 5 | 11 | 8 | 9 | 7 | 10 | 8 | 54.5 | 53.3 |
| Personality | 17 | 10 | 4 | 8 | 12 | 12 | 9 | 11 | 12 | 15 | 60.7 | 62.5 |
| Psychometrics | 3 | 4 | 3 | 2 | 2 | 1 | 4 | 3 | 7 | 4 | 50.0 | 50.0 |
| School | 69 | 53 | 57 | 59 | 65 | 53 | 62 | 71 | 66 | 81 | 64.5 | 76.4 |
| Social | 68 | 92 | 86 | 78 | 67 | 100 | 84 | 111 | 116 | 117 | 53.1 | 62.9 |
| Psychology, general | 204 | 233 | 185 | 168 | 185 | 158 | 185 | 180 | 198 | 205 | 56.0 | 67.9 |
| Psychology, other | 77 | 103 | 110 | 98 | 125 | 191 | 189 | 205 | 92 | 124 | 50.7 | 63.3 |
| Social sciences, total | 1,135 | 1,111 | 1,313 | 1,299 | 1,422 | 1,443 | 1,467 | 1,461 | 1,585 | 1,683 | 34.1 | 41.6 |
| Economics, total | 198 | 200 | 217 | 219 | 246 | 249 | 279 | 263 | 267 | 311 | 18.6 | 27.0 |
| Agricultural economics | 25 | 27 | 38 | 28 | 31 | 20 | 42 | 37 | 34 | 40 | 15.2 | 25.8 |
| Econometrics | 2 | 3 | 5 | 2 | 7 | 4 | 4 | 8 | 4 | 4 | 7.7 | 16.0 |
| Economics | 171 | 170 | 174 | 189 | 208 | 225 | 233 | 218 | 229 | 267 | 19.6 | 27.4 |
| Political science, total | 201 | 170 | 211 | 235 | 246 | 282 | 266 | 305 | 295 | 365 | 28.7 | 38.0 |
| International relations & affairs ²⁵ | 29 | 15 | 24 | 24 | 28 | 24 | 21 | 32 | 19 | 33 | 30.9 | 34.0 |
| Political science/ government | 107 | 108 | 117 | 142 | 129 | 173 | 167 | 186 | 195 | 243 | 24.9 | 36.7 |
| Public administration | 37 | 22 | 32 | 30 | 41 | 47 | 43 | 37 | 30 | 48 | 38.1 | 45.7 |
| Public policy analysis ²⁶ | 28 | 25 | 38 | 39 | 48 | 38 | 35 | 50 | 51 | 41 | 35.4 | 42.3 |
| Sociology, total | 232 | 218 | 246 | 250 | 255 | 283 | 294 | 276 | 331 | 317 | 50.7 | 54.7 |
| Demography/population studies ²⁷ | 10 | 11 | 16 | 5 | 12 | 12 | 6 | 2 | 16 | 13 | 45.5 | 41.9 |
| Sociology | 222 | 207 | 230 | 245 | 243 | 271 | 288 | 274 | 315 | 304 | 50.9 | 55.4 |
| Other social sciences, total | 504 | 523 | 639 | 595 | 675 | 629 | 628 | 617 | 692 | 690 | 45.7 | 50.9 |
| American studies | 48 | 37 | 56 | 47 | 57 | 48 | 53 | 67 | 46 | 52 | 63.2 | 52.0 |
| Anthropology | 148 | 173 | 210 | 155 | 213 | 208 | 219 | 214 | 240 | 239 | 45.5 | 56.2 |
| Archaeology | 14 | 12 | 20 | 17 | 18 | 17 | 18 | 11 | 20 | 23 | 53.8 | 67.6 |
| Area studies | 5 | 9 | 5 | 11 | 11 | 17 | 12 | 9 | 5 | 11 | 29.4 | 78.6 |
| Criminology | 10 | 16 | 18 | 15 | 15 | 12 | 23 | 25 | 25 | 22 | 31.3 | 40.0 |
| Geography | 25 | 35 | 33 | 29 | 40 | 35 | 43 | 45 | 54 | 49 | 23.8 | 31.8 |
| History/philosophy of science & technology ²⁸ | 9 | 9 | 11 | 8 | 16 | 10 | 18 | 10 | 13 | 19 | 45.0 | 44.2 |
| Linguistics | 106 | 90 | 112 | 133 | 118 | 134 | 102 | 113 | 135 | 123 | 56.4 | 56.2 |
| Statistics | 20 | 12 | 10 | 11 | 14 | 16 | 11 | 7 | 23 | 21 | 29.0 | 35.0 |
| Urban affairs & studies ²⁹ | 23 | 21 | 22 | 31 | 44 | 43 | 37 | 38 | 29 | 26 | 37.1 | 34.7 |
| Social sciences, general | 9 | 9 | 17 | 20 | 13 | 9 | 23 | 15 | 14 | 17 | 34.6 | 56.7 |
| Social sciences, other | 87 | 100 | 125 | 118 | 116 | 80 | 69 | 63 | 88 | 88 | 55.1 | 59.9 |

See explanatory information, if any, and SOURCE at end of table.

**Table 2. Science and engineering (S&E) doctorates awarded to women,
by field of study and year of doctorate: 1989-98**

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | Percent women | |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|------|
| | | | | | | | | | | | 1989 | 1998 |
| Non-S&E, total ³⁰ | 6,404 | 6,736 | 6,941 | 7,356 | 7,470 | 7,899 | 8,126 | 8,299 | 8,330 | 8,514 | 50.8 | 55.2 |
| Health | 629 | 592 | 668 | 710 | 777 | 843 | 843 | 861 | 936 | 1,006 | 64.6 | 67.1 |
| Humanities ³¹ | 1,436 | 1,600 | 1,720 | 1,858 | 1,919 | 2,054 | 2,254 | 2,343 | 2,377 | 2,458 | 44.3 | 48.2 |
| Education | 3,610 | 3,752 | 3,748 | 3,976 | 3,921 | 4,089 | 4,092 | 4,179 | 4,103 | 4,120 | 57.5 | 62.8 |
| Professional/other | 729 | 792 | 805 | 812 | 853 | 913 | 937 | 916 | 914 | 930 | 34.7 | 41.4 |
| Grand total, all fields | 12,513 | 13,106 | 13,873 | 14,436 | 15,122 | 15,819 | 16,414 | 16,945 | 17,251 | 17,856 | 36.5 | 41.8 |

- 1 In 1993 this subfield was changed from "Polymer engineering" to "Polymer and plastics engineering."
- 2 In 1993 this subfield was changed from "Industrial engineering" to "Industrial and manufacturing engineering."
- 3 In 1993 this subfield was changed from "Ceramic engineering" to "Ceramic sciences engineering."
- 4 These subfields were deleted in 1991: "Naval architecture/marine engineering," "Electron physics," and "Applied geology."
- 5 In 1993 this subfield was changed from "Pharmaceutical chemistry" to "Medicinal and pharmaceutical chemistry."
- 6 In 1993 this subfield was changed from "Atomic/molecular physics" to "Chemical and atomic/molecular physics."
- 7 In 1993 this subfield was changed from "Plasma physics" to "Plasma and high-temperature physics."
- 8 In 1993 this subfield was changed from "Solid state physics" to "Solid state and low-temperature physics."
- 9 In 1993 this subfield was changed from "Math probability and statistics" to "Mathematical statistics."
- 10 These subfields were introduced in 1995: "Biomedical sciences" and "Family and marriage counseling."
- 11 "Biotechnology research" was introduced in 1993.
- 12 In 1990 this subfield was changed from "Embryology" to "Developmental biology/embryology."
- 13 In 1993 this subfield was changed from "Immunology" to "Biological immunology."
- 14 In 1993 this subfield was changed from "Agronomy" to "Agronomy and crop science."
- 15 In 1993 this subfield was changed from "Fisheries science" to "Fisheries science and management."
- 16 In 1988 this subfield was changed from "Wildlife management" to "Wildlife/range management."
- 17 In 1990 "Food sciences" was separated into "Food engineering" and "Food sciences, other."
- 18 In 1988 "Forestry science" was separated into "Forest biology," "Forest engineering," "Forest management," "Wood science," "Renewable natural resources," and "Forestry and related sciences, other." In 1993 "Pulp and paper technology" was added to "Wood science," and "Conservation" was added to "Renewable natural resources." "Forest engineering" was deleted from the survey in 1994 and reintroduced in 1995.
- 19 "Plant protection-pest management" was deleted in 1991.
- 20 In 1988 "Soil sciences" was separated into "Soil chemistry/microbiology" and "Soil sciences, other."
- 21 In 1993 this subfield was changed from "Cognitive psychology" to "Cognitive psychology and psycholinguistics."
- 22 In 1993 this subfield was changed from "Developmental psychology" to "Developmental and child psychology."
- 23 "Human/individual & family development" was introduced in 1994.
- 24 In 1993 this subfield was changed from "Physiological psychology" to "Physiological psychology/psychobiology."
- 25 In 1993 this subfield was changed from "International relations" to "International relations and affairs."
- 26 In 1993 this subfield was changed from "Public policy studies" to "Public policy analysis."
- 27 In 1993 this subfield was changed from "Demography" to "Demography and population studies."
- 28 In 1993 this subfield was changed from "History of science" to "History and philosophy of science and technology."
- 29 In 1993 this subfield was changed from "Urban studies" to "Urban affairs and studies."
- 30 Non-S&E doctorates include those whose field of specialization is unknown.
- 31 Categories differ from those published by other Federal sponsors and the Summary Reports in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

KEY: - = Percent not available as data were not collected that year.
N/A = Not available (i.e., the subfield was not identified separately in the questionnaire for that year)

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| U.S. citizens and permanent residents | | | | | | | | | | |
| Science and engineering, total | 14,592 | 15,364 | 15,914 | 15,942 | 16,573 | 18,187 | 18,996 | 18,628 | 18,250 | 18,125 |
| Engineering, total | 2,229 | 2,346 | 2,474 | 2,520 | 2,697 | 3,053 | 3,342 | 3,383 | 3,303 | 3,021 |
| Chemical | 444 | 392 | 399 | 378 | 377 | 380 | 381 | 392 | 408 | 372 |
| Civil | 247 | 241 | 213 | 215 | 227 | 292 | 309 | 305 | 326 | 293 |
| Electrical | 539 | 599 | 686 | 719 | 795 | 899 | 971 | 926 | 933 | 797 |
| Mechanical | 325 | 368 | 359 | 426 | 434 | 538 | 563 | 588 | 533 | 512 |
| Other engineering | 674 | 746 | 817 | 782 | 864 | 944 | 1,118 | 1,172 | 1,103 | 1,047 |
| Sciences, total | 12,363 | 13,018 | 13,440 | 13,422 | 13,876 | 15,134 | 15,654 | 15,245 | 14,947 | 15,104 |
| Physical sciences, total | 2,131 | 2,341 | 2,300 | 2,357 | 2,330 | 2,789 | 2,841 | 2,568 | 2,488 | 2,435 |
| Astronomy | 82 | 96 | 86 | 106 | 111 | 112 | 141 | 149 | 157 | 148 |
| Chemistry | 1,383 | 1,497 | 1,461 | 1,441 | 1,400 | 1,616 | 1,624 | 1,461 | 1,434 | 1,455 |
| Physics | 654 | 725 | 739 | 790 | 806 | 1,044 | 1,059 | 948 | 880 | 814 |
| Other physical sciences | 12 | 23 | 14 | 20 | 13 | 17 | 17 | 10 | 17 | 18 |
| Earth, atmospheric, & ocean sciences | 547 | 535 | 618 | 541 | 504 | 613 | 594 | 558 | 594 | 559 |
| Mathematics | 428 | 422 | 518 | 507 | 590 | 657 | 771 | 646 | 619 | 666 |
| Computer sciences | 396 | 403 | 451 | 489 | 509 | 543 | 616 | 513 | 513 | 551 |
| Biological sciences | 3,300 | 3,380 | 3,525 | 3,568 | 3,752 | 4,088 | 4,329 | 4,365 | 4,234 | 4,279 |
| Agricultural sciences | 651 | 687 | 620 | 573 | 506 | 616 | 598 | 576 | 549 | 540 |
| Psychology | 2,737 | 2,992 | 3,018 | 2,986 | 3,161 | 3,136 | 3,184 | 3,226 | 3,108 | 3,259 |
| Social sciences | 2,173 | 2,258 | 2,390 | 2,401 | 2,524 | 2,692 | 2,721 | 2,793 | 2,842 | 2,815 |
| Non-S&E, total | 10,435 | 11,239 | 11,516 | 12,048 | 12,135 | 12,707 | 13,063 | 12,878 | 12,612 | 12,789 |
| Health | 756 | 756 | 839 | 855 | 939 | 1,050 | 1,045 | 1,016 | 1,018 | 1,116 |
| Humanities ¹ | 2,716 | 3,082 | 3,194 | 3,440 | 3,512 | 3,766 | 4,055 | 4,045 | 4,196 | 4,288 |
| Education | 5,410 | 5,787 | 5,788 | 6,017 | 5,968 | 6,063 | 5,995 | 6,062 | 5,712 | 5,700 |
| Professional/other | 1,553 | 1,614 | 1,695 | 1,736 | 1,716 | 1,828 | 1,968 | 1,755 | 1,686 | 1,685 |
| Grand total, all fields | 25,027 | 26,603 | 27,430 | 27,990 | 28,708 | 30,894 | 32,059 | 31,506 | 30,862 | 30,914 |
| U.S. citizens and permanent residents, American Indian/Alaskan Native | | | | | | | | | | |
| Science and engineering, total | 53 | 43 | 56 | 69 | 43 | 64 | 69 | 96 | 79 | 96 |
| Engineering, total | 7 | 4 | 6 | 11 | 2 | 6 | 10 | 14 | 16 | 13 |
| Chemical | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 4 | 3 |
| Civil | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 |
| Electrical | 0 | 0 | 2 | 4 | 0 | 1 | 2 | 2 | 4 | 3 |
| Mechanical | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 3 | 6 | 2 |
| Other engineering | 5 | 2 | 1 | 4 | 1 | 4 | 4 | 6 | 0 | 5 |
| Sciences, total | 46 | 39 | 50 | 58 | 41 | 58 | 59 | 82 | 63 | 83 |
| Physical sciences, total | 10 | 3 | 10 | 12 | 5 | 6 | 9 | 6 | 9 | 10 |
| Astronomy | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| Chemistry | 5 | 3 | 9 | 6 | 2 | 4 | 7 | 4 | 6 | 7 |
| Physics | 3 | 0 | 1 | 6 | 2 | 2 | 2 | 2 | 2 | 2 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 6 | 1 | 3 | 1 | 4 | 1 | 0 | 2 | 2 | 3 |
| Mathematics | 0 | 1 | 0 | 2 | 1 | 2 | 2 | 1 | 1 | 3 |
| Computer sciences | 2 | 0 | 1 | 2 | 1 | 1 | 0 | 4 | 1 | 3 |
| Biological sciences | 7 | 4 | 10 | 13 | 7 | 16 | 15 | 21 | 9 | 12 |
| Agricultural sciences | 2 | 4 | 4 | 0 | 1 | 1 | 2 | 5 | 5 | 9 |
| Psychology | 11 | 19 | 13 | 15 | 15 | 12 | 14 | 18 | 18 | 31 |
| Social sciences | 8 | 7 | 9 | 13 | 7 | 19 | 17 | 25 | 18 | 12 |
| Non-S&E, total | 41 | 54 | 76 | 80 | 77 | 79 | 80 | 91 | 87 | 93 |
| Health | 3 | 1 | 5 | 5 | 6 | 6 | 9 | 4 | 6 | 4 |
| Humanities ¹ | 7 | 6 | 10 | 18 | 10 | 20 | 18 | 18 | 19 | 21 |
| Education | 25 | 37 | 56 | 50 | 51 | 37 | 41 | 60 | 51 | 50 |
| Professional/other | 6 | 10 | 5 | 7 | 10 | 16 | 12 | 9 | 11 | 18 |
| Grand total, all fields | 94 | 97 | 132 | 149 | 120 | 143 | 149 | 187 | 166 | 189 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| U.S. citizens and permanent residents, Asian/Pacific Islander | | | | | | | | | | |
| Science and engineering, total | 986 | 1,009 | 1,180 | 1,345 | 1,610 | 2,989 | 3,671 | 3,091 | 2,533 | 2,140 |
| Engineering, total | 361 | 359 | 405 | 451 | 527 | 867 | 1,033 | 895 | 707 | 555 |
| Chemical | 77 | 51 | 50 | 54 | 62 | 96 | 101 | 81 | 73 | 65 |
| Civil | 36 | 28 | 30 | 34 | 41 | 69 | 91 | 89 | 72 | 38 |
| Electrical | 93 | 115 | 140 | 175 | 199 | 304 | 322 | 275 | 257 | 206 |
| Mechanical | 66 | 69 | 62 | 78 | 93 | 179 | 190 | 166 | 110 | 90 |
| Other engineering | 89 | 96 | 123 | 110 | 132 | 219 | 329 | 284 | 195 | 156 |
| Sciences, total | 625 | 650 | 775 | 894 | 1,083 | 2,122 | 2,638 | 2,196 | 1,826 | 1,585 |
| Physical sciences, total | 156 | 164 | 172 | 227 | 265 | 600 | 751 | 504 | 403 | 332 |
| Astronomy | 2 | 5 | 0 | 4 | 4 | 10 | 22 | 12 | 8 | 13 |
| Chemistry | 96 | 99 | 122 | 135 | 157 | 332 | 416 | 296 | 235 | 207 |
| Physics | 57 | 58 | 50 | 88 | 103 | 255 | 312 | 195 | 159 | 111 |
| Other physical sciences | 1 | 2 | 0 | 0 | 1 | 3 | 1 | 1 | 1 | 1 |
| Earth, atmospheric, & ocean sciences | 23 | 15 | 17 | 27 | 22 | 89 | 104 | 77 | 72 | 50 |
| Mathematics | 24 | 27 | 57 | 52 | 79 | 142 | 208 | 140 | 99 | 71 |
| Computer sciences | 52 | 48 | 66 | 86 | 77 | 117 | 137 | 111 | 106 | 91 |
| Biological sciences | 201 | 200 | 261 | 269 | 370 | 720 | 925 | 888 | 719 | 658 |
| Agricultural sciences | 23 | 32 | 24 | 37 | 29 | 72 | 78 | 81 | 63 | 47 |
| Psychology | 55 | 53 | 59 | 59 | 73 | 109 | 122 | 124 | 126 | 114 |
| Social sciences | 91 | 111 | 119 | 137 | 168 | 273 | 313 | 271 | 238 | 222 |
| Non-S&E, total | 282 | 297 | 351 | 419 | 407 | 557 | 638 | 606 | 577 | 580 |
| Health | 22 | 39 | 44 | 52 | 45 | 94 | 94 | 89 | 87 | 84 |
| Humanities ¹ | 79 | 62 | 81 | 99 | 108 | 151 | 193 | 191 | 177 | 195 |
| Education | 102 | 104 | 130 | 144 | 144 | 173 | 177 | 185 | 179 | 180 |
| Professional/other | 79 | 92 | 96 | 124 | 110 | 139 | 174 | 141 | 134 | 121 |
| Grand total, all fields | 1,268 | 1,306 | 1,531 | 1,764 | 2,017 | 3,546 | 4,309 | 3,697 | 3,110 | 2,720 |
| U.S. citizens and permanent residents, black | | | | | | | | | | |
| Science and engineering, total | 367 | 374 | 464 | 408 | 469 | 500 | 560 | 576 | 616 | 639 |
| Engineering, total | 33 | 40 | 55 | 49 | 50 | 54 | 71 | 74 | 97 | 84 |
| Chemical | 5 | 10 | 8 | 13 | 6 | 8 | 3 | 12 | 16 | 3 |
| Civil | 5 | 1 | 12 | 3 | 5 | 8 | 11 | 8 | 10 | 10 |
| Electrical | 9 | 8 | 16 | 17 | 15 | 17 | 24 | 22 | 31 | 23 |
| Mechanical | 5 | 5 | 3 | 5 | 3 | 7 | 14 | 10 | 12 | 14 |
| Other engineering | 9 | 16 | 16 | 11 | 21 | 14 | 19 | 22 | 28 | 34 |
| Sciences, total | 334 | 334 | 409 | 359 | 419 | 446 | 489 | 502 | 519 | 555 |
| Physical sciences, total | 31 | 30 | 32 | 25 | 41 | 46 | 43 | 60 | 51 | 54 |
| Astronomy | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 2 | 1 |
| Chemistry | 26 | 24 | 23 | 17 | 31 | 34 | 33 | 45 | 34 | 43 |
| Physics | 5 | 5 | 9 | 6 | 7 | 11 | 9 | 15 | 15 | 10 |
| Other physical sciences | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 4 | 3 | 3 | 6 | 4 | 6 | 3 | 4 | 9 | 9 |
| Mathematics | 8 | 4 | 11 | 4 | 8 | 11 | 5 | 8 | 7 | 16 |
| Computer sciences | 1 | 1 | 8 | 5 | 6 | 10 | 11 | 12 | 4 | 14 |
| Biological sciences | 57 | 51 | 64 | 62 | 75 | 79 | 108 | 98 | 111 | 108 |
| Agricultural sciences | 14 | 15 | 17 | 14 | 16 | 22 | 17 | 25 | 25 | 19 |
| Psychology | 97 | 115 | 130 | 106 | 119 | 124 | 151 | 154 | 155 | 155 |
| Social sciences | 122 | 115 | 144 | 137 | 150 | 148 | 151 | 141 | 157 | 180 |
| Non-S&E, total | 596 | 676 | 702 | 708 | 811 | 779 | 917 | 881 | 859 | 947 |
| Health | 29 | 32 | 40 | 38 | 59 | 46 | 60 | 49 | 55 | 62 |
| Humanities ¹ | 71 | 72 | 92 | 90 | 98 | 106 | 114 | 119 | 137 | 139 |
| Education | 432 | 496 | 472 | 501 | 557 | 521 | 629 | 609 | 556 | 646 |
| Professional/other | 64 | 76 | 98 | 79 | 97 | 106 | 114 | 104 | 111 | 100 |
| Grand total, all fields | 963 | 1,050 | 1,166 | 1,116 | 1,280 | 1,279 | 1,477 | 1,457 | 1,475 | 1,586 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------------------------|------|------|------|------|------|-------|-------|-------|-------|-------|
| U.S. citizens and permanent residents, Hispanic | | | | | | | | | | |
| Science and engineering, total | 382 | 468 | 492 | 513 | 542 | 548 | 571 | 623 | 653 | 752 |
| Engineering, total | 47 | 54 | 60 | 71 | 66 | 66 | 77 | 98 | 97 | 110 |
| Chemical | 9 | 8 | 11 | 16 | 10 | 7 | 13 | 19 | 7 | 13 |
| Civil | 8 | 9 | 5 | 7 | 12 | 14 | 11 | 6 | 12 | 16 |
| Electrical | 14 | 13 | 15 | 17 | 17 | 21 | 15 | 26 | 26 | 31 |
| Mechanical | 3 | 5 | 9 | 11 | 5 | 8 | 8 | 13 | 15 | 19 |
| Other engineering | 13 | 19 | 20 | 20 | 22 | 16 | 30 | 34 | 37 | 31 |
| Sciences, total | 335 | 414 | 432 | 442 | 476 | 482 | 494 | 525 | 556 | 642 |
| Physical sciences, total | 59 | 72 | 65 | 72 | 79 | 90 | 73 | 66 | 68 | 54 |
| Astronomy | 2 | 2 | 1 | 4 | 2 | 2 | 4 | 2 | 3 | 2 |
| Chemistry | 43 | 57 | 46 | 42 | 51 | 59 | 43 | 35 | 43 | 34 |
| Physics | 14 | 13 | 18 | 26 | 26 | 29 | 26 | 29 | 22 | 18 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 9 | 13 | 16 | 16 | 13 | 8 | 13 | 19 | 15 | 16 |
| Mathematics | 11 | 10 | 9 | 12 | 16 | 13 | 15 | 10 | 18 | 27 |
| Computer sciences | 4 | 5 | 12 | 8 | 7 | 7 | 6 | 16 | 17 | 14 |
| Biological sciences | 71 | 89 | 95 | 102 | 114 | 131 | 127 | 131 | 146 | 169 |
| Agricultural sciences | 18 | 23 | 15 | 18 | 20 | 25 | 21 | 13 | 26 | 35 |
| Psychology | 93 | 109 | 122 | 133 | 131 | 133 | 145 | 173 | 169 | 207 |
| Social sciences | 70 | 93 | 98 | 81 | 96 | 75 | 94 | 97 | 97 | 120 |
| Non-S&E, total | 312 | 369 | 375 | 396 | 431 | 482 | 490 | 482 | 530 | 559 |
| Health | 11 | 17 | 16 | 13 | 24 | 25 | 30 | 38 | 32 | 36 |
| Humanities ¹ | 100 | 127 | 136 | 129 | 145 | 168 | 153 | 174 | 203 | 192 |
| Education | 171 | 190 | 189 | 214 | 222 | 241 | 258 | 217 | 253 | 282 |
| Professional/other | 30 | 35 | 34 | 40 | 40 | 48 | 49 | 53 | 42 | 49 |
| Grand total, all fields | 694 | 837 | 867 | 909 | 973 | 1,030 | 1,061 | 1,105 | 1,183 | 1,311 |
| U.S. citizens and permanent residents, Puerto Rican | | | | | | | | | | |
| Science and engineering, total | 93 | 115 | 99 | 120 | 112 | 131 | 137 | 142 | 172 | 171 |
| Engineering, total | 7 | 6 | 9 | 13 | 10 | 10 | 13 | 22 | 23 | 17 |
| Chemical | 1 | 2 | 2 | 3 | 2 | 2 | 4 | 4 | 1 | 3 |
| Civil | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 1 |
| Electrical | 1 | 2 | 0 | 3 | 5 | 3 | 3 | 4 | 4 | 3 |
| Mechanical | 3 | 0 | 2 | 1 | 1 | 1 | 1 | 3 | 6 | 5 |
| Other engineering | 1 | 1 | 4 | 5 | 1 | 3 | 4 | 10 | 7 | 5 |
| Sciences, total | 86 | 109 | 90 | 107 | 102 | 121 | 124 | 120 | 149 | 154 |
| Physical sciences, total | 20 | 24 | 17 | 20 | 17 | 26 | 21 | 12 | 20 | 11 |
| Astronomy | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| Chemistry | 16 | 20 | 14 | 14 | 14 | 19 | 17 | 9 | 13 | 9 |
| Physics | 3 | 3 | 3 | 5 | 3 | 7 | 3 | 3 | 7 | 1 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 0 | 5 | 0 | 3 | 1 | 0 | 2 | 3 | 5 | 5 |
| Mathematics | 4 | 2 | 0 | 2 | 1 | 1 | 1 | 3 | 4 | 7 |
| Computer sciences | 0 | 2 | 3 | 1 | 1 | 4 | 0 | 5 | 6 | 2 |
| Biological sciences | 18 | 24 | 23 | 27 | 27 | 28 | 30 | 32 | 37 | 43 |
| Agricultural sciences | 7 | 5 | 0 | 3 | 10 | 5 | 3 | 4 | 4 | 3 |
| Psychology | 21 | 26 | 20 | 35 | 24 | 43 | 44 | 48 | 57 | 69 |
| Social sciences | 16 | 21 | 27 | 16 | 21 | 14 | 23 | 13 | 16 | 14 |
| Non-S&E, total | 83 | 95 | 92 | 109 | 120 | 126 | 132 | 109 | 139 | 128 |
| Health | 4 | 6 | 3 | 4 | 3 | 6 | 12 | 7 | 10 | 7 |
| Humanities ¹ | 22 | 28 | 30 | 22 | 36 | 38 | 30 | 38 | 49 | 36 |
| Education | 52 | 56 | 52 | 76 | 70 | 68 | 69 | 51 | 70 | 71 |
| Professional/other | 5 | 5 | 7 | 7 | 11 | 14 | 21 | 13 | 10 | 14 |
| Grand total, all fields | 176 | 210 | 191 | 229 | 232 | 257 | 269 | 251 | 311 | 299 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens and permanent residents, Mexican American | | | | | | | | | | |
| Science and engineering, total | 95 | 104 | 126 | 120 | 122 | 145 | 150 | 149 | 159 | 223 |
| Engineering, total | 14 | 13 | 14 | 10 | 12 | 15 | 19 | 28 | 19 | 30 |
| Chemical | 4 | 2 | 4 | 1 | 1 | 1 | 3 | 4 | 3 | 1 |
| Civil | 1 | 2 | 2 | 2 | 0 | 2 | 7 | 2 | 2 | 5 |
| Electrical | 3 | 4 | 3 | 3 | 2 | 4 | 3 | 9 | 5 | 7 |
| Mechanical | 0 | 3 | 3 | 2 | 0 | 2 | 2 | 4 | 3 | 3 |
| Other engineering | 6 | 2 | 2 | 2 | 9 | 6 | 4 | 9 | 6 | 14 |
| Sciences, total | 81 | 91 | 112 | 110 | 110 | 130 | 131 | 121 | 140 | 193 |
| Physical sciences, total | 11 | 11 | 15 | 9 | 12 | 24 | 13 | 23 | 15 | 21 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| Chemistry | 10 | 11 | 12 | 6 | 8 | 19 | 8 | 15 | 9 | 15 |
| Physics | 1 | 0 | 3 | 3 | 4 | 4 | 4 | 7 | 6 | 5 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 2 | 3 | 4 | 7 | 2 | 4 | 4 | 5 | 3 | 5 |
| Mathematics | 2 | 3 | 3 | 4 | 4 | 4 | 6 | 2 | 3 | 6 |
| Computer sciences | 0 | 0 | 0 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| Biological sciences | 12 | 22 | 26 | 24 | 24 | 30 | 28 | 28 | 42 | 54 |
| Agricultural sciences | 6 | 8 | 5 | 5 | 4 | 6 | 4 | 2 | 2 | 10 |
| Psychology | 31 | 25 | 35 | 37 | 42 | 40 | 48 | 38 | 48 | 53 |
| Social sciences | 17 | 19 | 24 | 21 | 21 | 20 | 25 | 22 | 25 | 41 |
| Non-S&E, total | 83 | 86 | 106 | 99 | 130 | 163 | 140 | 144 | 141 | 198 |
| Health | 5 | 7 | 3 | 5 | 8 | 5 | 8 | 6 | 7 | 15 |
| Humanities ¹ | 22 | 19 | 27 | 24 | 35 | 42 | 34 | 41 | 35 | 57 |
| Education | 50 | 50 | 67 | 58 | 74 | 102 | 93 | 79 | 90 | 114 |
| Professional/other | 6 | 10 | 9 | 12 | 13 | 14 | 5 | 18 | 9 | 12 |
| Grand total, all fields | 178 | 190 | 232 | 219 | 252 | 308 | 290 | 293 | 300 | 421 |
| U.S. citizens and permanent residents, other Hispanic | | | | | | | | | | |
| Science and engineering, total | 194 | 249 | 267 | 273 | 308 | 272 | 284 | 332 | 322 | 358 |
| Engineering, total | 26 | 35 | 37 | 48 | 44 | 41 | 45 | 48 | 55 | 63 |
| Chemical | 4 | 4 | 5 | 12 | 7 | 4 | 6 | 11 | 3 | 9 |
| Civil | 6 | 6 | 2 | 4 | 11 | 11 | 3 | 3 | 5 | 10 |
| Electrical | 10 | 7 | 12 | 11 | 10 | 14 | 9 | 13 | 17 | 21 |
| Mechanical | 0 | 2 | 4 | 8 | 4 | 5 | 5 | 6 | 6 | 11 |
| Other engineering | 6 | 16 | 14 | 13 | 12 | 7 | 22 | 15 | 24 | 12 |
| Sciences, total | 168 | 214 | 230 | 225 | 264 | 231 | 239 | 284 | 267 | 295 |
| Physical sciences, total | 28 | 37 | 33 | 43 | 50 | 40 | 39 | 31 | 33 | 22 |
| Astronomy | 1 | 1 | 1 | 3 | 2 | 1 | 2 | 1 | 3 | 0 |
| Chemistry | 17 | 26 | 20 | 22 | 29 | 21 | 18 | 11 | 21 | 10 |
| Physics | 10 | 10 | 12 | 18 | 19 | 18 | 19 | 19 | 9 | 12 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 7 | 5 | 12 | 6 | 10 | 4 | 7 | 11 | 7 | 6 |
| Mathematics | 5 | 5 | 6 | 6 | 11 | 8 | 8 | 5 | 11 | 14 |
| Computer sciences | 4 | 3 | 9 | 4 | 5 | 1 | 3 | 10 | 9 | 9 |
| Biological sciences | 41 | 43 | 46 | 51 | 63 | 73 | 69 | 71 | 67 | 72 |
| Agricultural sciences | 5 | 10 | 10 | 10 | 6 | 14 | 14 | 7 | 20 | 22 |
| Psychology | 41 | 58 | 67 | 61 | 65 | 50 | 53 | 87 | 64 | 85 |
| Social sciences | 37 | 53 | 47 | 44 | 54 | 41 | 46 | 62 | 56 | 65 |
| Non-S&E, total | 146 | 188 | 177 | 188 | 181 | 193 | 218 | 229 | 250 | 233 |
| Health | 2 | 4 | 10 | 4 | 13 | 14 | 10 | 25 | 15 | 14 |
| Humanities ¹ | 56 | 80 | 79 | 83 | 74 | 88 | 89 | 95 | 119 | 99 |
| Education | 69 | 84 | 70 | 80 | 78 | 71 | 96 | 87 | 93 | 97 |
| Professional/other | 19 | 20 | 18 | 21 | 16 | 20 | 23 | 22 | 23 | 23 |
| Grand total, all fields | 340 | 437 | 444 | 461 | 489 | 465 | 502 | 561 | 572 | 591 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| U.S. citizens and permanent residents, white | | | | | | | | | | |
| Science and engineering, total | 12,501 | 13,170 | 13,323 | 13,326 | 13,737 | 13,889 | 13,902 | 13,999 | 13,717 | 13,929 |
| Engineering, total | 1,726 | 1,840 | 1,837 | 1,880 | 2,025 | 2,020 | 2,090 | 2,260 | 2,267 | 2,160 |
| Chemical | 345 | 318 | 322 | 284 | 295 | 259 | 256 | 274 | 291 | 276 |
| Civil | 191 | 196 | 159 | 166 | 168 | 199 | 194 | 199 | 219 | 216 |
| Electrical | 405 | 450 | 478 | 487 | 553 | 548 | 588 | 588 | 573 | 519 |
| Mechanical | 241 | 286 | 266 | 326 | 328 | 337 | 338 | 392 | 374 | 368 |
| Other engineering | 544 | 590 | 612 | 617 | 681 | 677 | 714 | 807 | 810 | 781 |
| Sciences, total | 10,775 | 11,330 | 11,486 | 11,446 | 11,712 | 11,869 | 11,812 | 11,739 | 11,450 | 11,769 |
| Physical sciences, total | 1,828 | 2,008 | 1,968 | 1,973 | 1,911 | 2,025 | 1,922 | 1,888 | 1,875 | 1,907 |
| Astronomy | 74 | 86 | 83 | 95 | 100 | 97 | 111 | 131 | 131 | 121 |
| Chemistry | 1,188 | 1,284 | 1,239 | 1,219 | 1,145 | 1,179 | 1,111 | 1,063 | 1,073 | 1,123 |
| Physics | 555 | 618 | 633 | 641 | 656 | 736 | 686 | 685 | 655 | 647 |
| Other physical sciences | 11 | 20 | 13 | 18 | 10 | 13 | 14 | 9 | 16 | 16 |
| Earth, atmospheric, & ocean sciences | 498 | 494 | 557 | 485 | 455 | 504 | 464 | 449 | 477 | 462 |
| Mathematics | 369 | 372 | 419 | 425 | 476 | 479 | 535 | 478 | 473 | 522 |
| Computer sciences | 319 | 339 | 355 | 378 | 410 | 401 | 453 | 356 | 357 | 406 |
| Biological sciences | 2,904 | 2,975 | 3,041 | 3,068 | 3,146 | 3,107 | 3,119 | 3,171 | 3,140 | 3,226 |
| Agricultural sciences | 570 | 601 | 545 | 493 | 438 | 487 | 473 | 444 | 412 | 417 |
| Psychology | 2,453 | 2,648 | 2,652 | 2,636 | 2,807 | 2,730 | 2,727 | 2,741 | 2,501 | 2,630 |
| Social sciences | 1,834 | 1,893 | 1,949 | 1,988 | 2,069 | 2,136 | 2,119 | 2,212 | 2,215 | 2,199 |
| Non-S&E, total | 9,069 | 9,708 | 9,862 | 10,299 | 10,315 | 10,705 | 10,817 | 10,686 | 10,096 | 10,224 |
| Health | 684 | 662 | 720 | 735 | 800 | 867 | 835 | 822 | 821 | 903 |
| Humanities ¹ | 2,399 | 2,766 | 2,821 | 3,061 | 3,109 | 3,283 | 3,523 | 3,494 | 3,513 | 3,588 |
| Education | 4,634 | 4,900 | 4,889 | 5,051 | 4,965 | 5,044 | 4,853 | 4,940 | 4,429 | 4,390 |
| Professional/other | 1,352 | 1,380 | 1,432 | 1,452 | 1,441 | 1,511 | 1,606 | 1,430 | 1,333 | 1,343 |
| Grand total, all fields | 21,570 | 22,878 | 23,185 | 23,625 | 24,052 | 24,594 | 24,719 | 24,685 | 23,813 | 24,153 |
| U.S. citizens and permanent residents, male | | | | | | | | | | |
| Science and engineering, total | 9,671 | 10,182 | 10,317 | 10,365 | 10,549 | 11,693 | 12,083 | 11,668 | 11,312 | 11,001 |
| Engineering, total | 1,954 | 2,070 | 2,158 | 2,192 | 2,349 | 2,605 | 2,822 | 2,860 | 2,794 | 2,574 |
| Chemical | 375 | 330 | 339 | 296 | 313 | 302 | 293 | 294 | 331 | 296 |
| Civil | 207 | 207 | 188 | 192 | 195 | 237 | 257 | 258 | 268 | 236 |
| Electrical | 503 | 552 | 638 | 652 | 715 | 811 | 851 | 821 | 827 | 706 |
| Mechanical | 306 | 344 | 322 | 401 | 398 | 484 | 514 | 528 | 478 | 462 |
| Other engineering | 563 | 637 | 671 | 651 | 728 | 771 | 907 | 959 | 890 | 874 |
| Sciences, total | 7,717 | 8,112 | 8,159 | 8,173 | 8,200 | 9,088 | 9,261 | 8,808 | 8,518 | 8,427 |
| Physical sciences, total | 1,694 | 1,871 | 1,846 | 1,843 | 1,809 | 2,164 | 2,133 | 1,958 | 1,903 | 1,836 |
| Astronomy | 69 | 78 | 79 | 91 | 88 | 91 | 116 | 114 | 131 | 120 |
| Chemistry | 1,018 | 1,114 | 1,093 | 1,040 | 999 | 1,152 | 1,087 | 1,022 | 1,005 | 997 |
| Physics | 596 | 663 | 663 | 696 | 712 | 907 | 916 | 814 | 756 | 708 |
| Other physical sciences | 11 | 16 | 11 | 16 | 10 | 14 | 14 | 8 | 11 | 11 |
| Earth, atmospheric, & ocean sciences | 427 | 417 | 461 | 394 | 384 | 469 | 450 | 428 | 434 | 390 |
| Mathematics | 327 | 329 | 406 | 390 | 426 | 506 | 588 | 501 | 447 | 469 |
| Computer sciences | 312 | 313 | 357 | 406 | 400 | 449 | 473 | 422 | 414 | 431 |
| Biological sciences | 2,024 | 2,068 | 2,135 | 2,130 | 2,168 | 2,345 | 2,469 | 2,424 | 2,325 | 2,370 |
| Agricultural sciences | 487 | 528 | 483 | 423 | 372 | 456 | 463 | 401 | 393 | 359 |
| Psychology | 1,174 | 1,220 | 1,128 | 1,206 | 1,223 | 1,169 | 1,128 | 1,043 | 1,015 | 1,055 |
| Social sciences | 1,272 | 1,366 | 1,343 | 1,381 | 1,418 | 1,530 | 1,557 | 1,631 | 1,587 | 1,517 |
| Non-S&E, total | 4,864 | 5,173 | 5,295 | 5,447 | 5,439 | 5,679 | 5,793 | 5,515 | 5,464 | 5,443 |
| Health | 225 | 239 | 252 | 226 | 260 | 328 | 325 | 292 | 283 | 299 |
| Humanities ¹ | 1,473 | 1,660 | 1,703 | 1,832 | 1,815 | 1,978 | 2,077 | 2,000 | 2,182 | 2,206 |
| Education | 2,221 | 2,358 | 2,347 | 2,347 | 2,378 | 2,307 | 2,243 | 2,238 | 2,043 | 2,047 |
| Professional/other | 945 | 916 | 993 | 1,042 | 986 | 1,066 | 1,148 | 985 | 956 | 891 |
| Grand total, all fields | 14,535 | 15,355 | 15,612 | 15,812 | 15,988 | 17,372 | 17,876 | 17,183 | 16,776 | 16,444 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------------------------------------------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| U.S. citizens and permanent residents, male, American Indian/Alaskan Native | | | | | | | | | | |
| Science and engineering, total | 33 | 25 | 37 | 42 | 25 | 40 | 44 | 62 | 44 | 54 |
| Engineering, total | 5 | 4 | 4 | 8 | 2 | 4 | 10 | 12 | 13 | 9 |
| Chemical | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 3 | 0 |
| Civil | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Electrical | 0 | 0 | 1 | 3 | 0 | 1 | 2 | 1 | 4 | 3 |
| Mechanical | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 3 | 5 | 2 |
| Other engineering | 4 | 2 | 1 | 3 | 1 | 2 | 4 | 6 | 0 | 4 |
| Sciences, total | 28 | 21 | 33 | 34 | 23 | 36 | 34 | 50 | 31 | 45 |
| Physical sciences, total | 10 | 3 | 8 | 10 | 3 | 5 | 6 | 5 | 9 | 9 |
| Astronomy | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| Chemistry | 5 | 3 | 7 | 4 | 1 | 4 | 4 | 3 | 6 | 6 |
| Physics | 3 | 0 | 1 | 6 | 1 | 1 | 2 | 2 | 2 | 2 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 4 | 0 | 2 | 1 | 4 | 1 | 0 | 2 | 1 | 2 |
| Mathematics | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| Computer sciences | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | 3 |
| Biological sciences | 4 | 3 | 6 | 8 | 5 | 11 | 10 | 12 | 5 | 6 |
| Agricultural sciences | 1 | 4 | 4 | 0 | 1 | 1 | 2 | 2 | 5 | 7 |
| Psychology | 3 | 6 | 5 | 6 | 6 | 5 | 6 | 9 | 6 | 13 |
| Social sciences | 5 | 4 | 7 | 6 | 3 | 11 | 9 | 17 | 4 | 4 |
| Non-S&E, total | 16 | 27 | 37 | 40 | 35 | 31 | 38 | 40 | 33 | 50 |
| Health | 0 | 1 | 3 | 3 | 0 | 1 | 2 | 1 | 2 | 1 |
| Humanities ¹ | 2 | 4 | 3 | 12 | 7 | 12 | 10 | 9 | 8 | 14 |
| Education | 10 | 16 | 29 | 20 | 21 | 10 | 17 | 22 | 18 | 26 |
| Professional/other | 4 | 6 | 2 | 5 | 7 | 8 | 9 | 8 | 5 | 9 |
| Grand total, all fields | 49 | 52 | 74 | 82 | 60 | 71 | 82 | 102 | 77 | 104 |
| U.S. citizens and permanent residents, male, Asian/Pacific Islander | | | | | | | | | | |
| Science and engineering, total | 745 | 757 | 806 | 927 | 1,079 | 2,169 | 2,557 | 2,108 | 1,640 | 1,376 |
| Engineering, total | 327 | 326 | 356 | 390 | 466 | 748 | 863 | 762 | 589 | 457 |
| Chemical | 66 | 40 | 41 | 38 | 55 | 71 | 76 | 63 | 61 | 46 |
| Civil | 33 | 25 | 26 | 32 | 39 | 65 | 77 | 75 | 58 | 32 |
| Electrical | 85 | 109 | 135 | 154 | 174 | 273 | 276 | 246 | 218 | 175 |
| Mechanical | 65 | 66 | 59 | 74 | 90 | 155 | 167 | 149 | 94 | 79 |
| Other engineering | 78 | 86 | 95 | 92 | 108 | 184 | 267 | 229 | 158 | 125 |
| Sciences, total | 418 | 431 | 450 | 537 | 613 | 1,421 | 1,694 | 1,346 | 1,051 | 919 |
| Physical sciences, total | 120 | 122 | 124 | 147 | 168 | 422 | 540 | 359 | 270 | 231 |
| Astronomy | 0 | 3 | 0 | 2 | 2 | 9 | 18 | 8 | 7 | 10 |
| Chemistry | 73 | 70 | 86 | 79 | 85 | 203 | 270 | 188 | 142 | 135 |
| Physics | 46 | 47 | 38 | 66 | 80 | 208 | 251 | 162 | 121 | 85 |
| Other physical sciences | 1 | 2 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 |
| Earth, atmospheric, & ocean sciences | 19 | 14 | 11 | 19 | 14 | 72 | 76 | 65 | 52 | 31 |
| Mathematics | 21 | 20 | 39 | 33 | 43 | 116 | 158 | 104 | 71 | 44 |
| Computer sciences | 42 | 41 | 51 | 74 | 58 | 101 | 107 | 95 | 80 | 68 |
| Biological sciences | 112 | 113 | 132 | 136 | 198 | 451 | 515 | 480 | 370 | 367 |
| Agricultural sciences | 17 | 26 | 16 | 25 | 20 | 52 | 62 | 51 | 45 | 29 |
| Psychology | 28 | 22 | 15 | 20 | 22 | 32 | 44 | 31 | 32 | 28 |
| Social sciences | 59 | 73 | 62 | 83 | 90 | 175 | 192 | 161 | 131 | 121 |
| Non-S&E, total | 160 | 152 | 166 | 209 | 208 | 300 | 312 | 290 | 244 | 261 |
| Health | 13 | 17 | 21 | 22 | 22 | 48 | 52 | 47 | 37 | 34 |
| Humanities ¹ | 42 | 28 | 39 | 48 | 42 | 84 | 83 | 86 | 71 | 81 |
| Education | 43 | 39 | 45 | 48 | 58 | 66 | 59 | 71 | 51 | 72 |
| Professional/other | 62 | 68 | 61 | 91 | 86 | 102 | 118 | 86 | 85 | 74 |
| Grand total, all fields | 905 | 909 | 972 | 1,136 | 1,287 | 2,469 | 2,869 | 2,398 | 1,884 | 1,637 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens and permanent residents, male, black | | | | | | | | | | |
| Science and engineering, total | 214 | 225 | 270 | 238 | 261 | 284 | 290 | 323 | 327 | 293 |
| Engineering, total | 30 | 34 | 47 | 43 | 39 | 41 | 56 | 55 | 74 | 62 |
| Chemical | 4 | 8 | 7 | 12 | 3 | 4 | 2 | 7 | 10 | 2 |
| Civil | 5 | 1 | 10 | 3 | 3 | 6 | 8 | 7 | 10 | 8 |
| Electrical | 9 | 7 | 14 | 15 | 13 | 14 | 20 | 17 | 27 | 19 |
| Mechanical | 5 | 5 | 2 | 5 | 3 | 6 | 13 | 7 | 11 | 14 |
| Other engineering | 7 | 13 | 14 | 8 | 17 | 11 | 13 | 17 | 16 | 19 |
| Sciences, total | 184 | 191 | 223 | 195 | 222 | 243 | 234 | 268 | 253 | 231 |
| Physical sciences, total | 24 | 23 | 27 | 19 | 31 | 33 | 25 | 47 | 41 | 25 |
| Astronomy | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 1 |
| Chemistry | 19 | 17 | 18 | 12 | 22 | 25 | 16 | 35 | 26 | 17 |
| Physics | 5 | 5 | 9 | 6 | 7 | 7 | 8 | 12 | 14 | 7 |
| Other physical sciences | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 3 | 1 | 2 | 5 | 4 | 5 | 3 | 2 | 7 | 6 |
| Mathematics | 5 | 3 | 7 | 4 | 7 | 8 | 4 | 6 | 5 | 9 |
| Computer sciences | 0 | 1 | 4 | 4 | 2 | 8 | 7 | 9 | 3 | 6 |
| Biological sciences | 33 | 29 | 32 | 38 | 43 | 34 | 65 | 58 | 51 | 40 |
| Agricultural sciences | 13 | 14 | 16 | 10 | 12 | 16 | 11 | 25 | 19 | 15 |
| Psychology | 36 | 43 | 44 | 28 | 44 | 46 | 39 | 39 | 41 | 43 |
| Social sciences | 70 | 77 | 91 | 87 | 79 | 93 | 80 | 82 | 86 | 87 |
| Non-S&E, total | 239 | 254 | 282 | 281 | 318 | 269 | 325 | 318 | 305 | 315 |
| Health | 9 | 14 | 17 | 14 | 18 | 11 | 18 | 13 | 15 | 13 |
| Humanities ¹ | 35 | 37 | 44 | 47 | 56 | 51 | 53 | 53 | 66 | 68 |
| Education | 162 | 169 | 179 | 174 | 201 | 161 | 204 | 203 | 172 | 191 |
| Professional/other | 33 | 34 | 42 | 46 | 43 | 46 | 50 | 49 | 52 | 43 |
| Grand total, all fields | 453 | 479 | 552 | 519 | 579 | 553 | 615 | 641 | 632 | 608 |
| U.S. citizens and permanent residents, male, Hispanic | | | | | | | | | | |
| Science and engineering, total | 227 | 290 | 306 | 308 | 320 | 318 | 339 | 351 | 388 | 426 |
| Engineering, total | 39 | 45 | 50 | 56 | 54 | 60 | 66 | 84 | 74 | 97 |
| Chemical | 5 | 7 | 7 | 12 | 7 | 7 | 11 | 13 | 4 | 13 |
| Civil | 8 | 7 | 3 | 6 | 10 | 11 | 10 | 6 | 11 | 13 |
| Electrical | 13 | 12 | 15 | 14 | 14 | 21 | 14 | 23 | 20 | 29 |
| Mechanical | 2 | 4 | 7 | 9 | 5 | 7 | 8 | 13 | 12 | 18 |
| Other engineering | 11 | 15 | 18 | 15 | 18 | 14 | 23 | 29 | 27 | 24 |
| Sciences, total | 188 | 245 | 256 | 252 | 266 | 258 | 273 | 267 | 314 | 329 |
| Physical sciences, total | 41 | 46 | 54 | 52 | 59 | 69 | 52 | 54 | 53 | 43 |
| Astronomy | 2 | 2 | 1 | 3 | 2 | 2 | 2 | 1 | 2 | 2 |
| Chemistry | 26 | 33 | 37 | 26 | 33 | 43 | 29 | 28 | 31 | 25 |
| Physics | 13 | 11 | 16 | 23 | 24 | 24 | 21 | 25 | 20 | 16 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 6 | 9 | 14 | 10 | 11 | 6 | 7 | 13 | 11 | 10 |
| Mathematics | 7 | 6 | 5 | 9 | 14 | 10 | 11 | 10 | 12 | 20 |
| Computer sciences | 1 | 4 | 11 | 7 | 6 | 7 | 2 | 9 | 15 | 13 |
| Biological sciences | 50 | 56 | 56 | 59 | 57 | 69 | 80 | 65 | 83 | 89 |
| Agricultural sciences | 15 | 17 | 12 | 14 | 15 | 13 | 16 | 9 | 19 | 22 |
| Psychology | 30 | 52 | 52 | 55 | 45 | 43 | 48 | 53 | 62 | 55 |
| Social sciences | 38 | 55 | 52 | 46 | 59 | 41 | 57 | 54 | 59 | 77 |
| Non-S&E, total | 149 | 159 | 152 | 174 | 197 | 200 | 200 | 213 | 229 | 252 |
| Health | 4 | 2 | 7 | 4 | 8 | 7 | 15 | 16 | 8 | 11 |
| Humanities ¹ | 51 | 52 | 64 | 66 | 72 | 79 | 71 | 84 | 106 | 102 |
| Education | 73 | 85 | 65 | 82 | 94 | 82 | 91 | 87 | 93 | 111 |
| Professional/other | 21 | 20 | 16 | 22 | 23 | 32 | 23 | 26 | 22 | 28 |
| Grand total, all fields | 376 | 449 | 458 | 482 | 517 | 518 | 539 | 564 | 617 | 678 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens and permanent residents, male, Puerto Rican | | | | | | | | | | |
| Science and engineering, total | 54 | 67 | 52 | 71 | 70 | 72 | 74 | 74 | 99 | 68 |
| Engineering, total | 6 | 4 | 7 | 10 | 8 | 10 | 11 | 17 | 19 | 16 |
| Chemical | 1 | 2 | 1 | 3 | 2 | 2 | 3 | 2 | 1 | 3 |
| Civil | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 5 | 1 |
| Electrical | 1 | 1 | 0 | 2 | 4 | 3 | 3 | 4 | 3 | 3 |
| Mechanical | 2 | 0 | 2 | 0 | 1 | 1 | 1 | 3 | 6 | 5 |
| Other engineering | 1 | 0 | 3 | 4 | 1 | 3 | 3 | 7 | 4 | 4 |
| Sciences, total | 48 | 63 | 45 | 61 | 62 | 62 | 63 | 57 | 80 | 52 |
| Physical sciences, total | 16 | 14 | 11 | 14 | 12 | 19 | 12 | 8 | 18 | 6 |
| Astronomy | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Chemistry | 12 | 10 | 9 | 9 | 9 | 13 | 9 | 6 | 11 | 4 |
| Physics | 3 | 3 | 2 | 4 | 3 | 6 | 3 | 2 | 7 | 1 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 0 | 4 | 0 | 3 | 1 | 0 | 1 | 3 | 4 | 2 |
| Mathematics | 1 | 2 | 0 | 1 | 1 | 1 | 0 | 3 | 3 | 4 |
| Computer sciences | 0 | 2 | 3 | 1 | 0 | 4 | 0 | 4 | 6 | 1 |
| Biological sciences | 14 | 14 | 12 | 16 | 16 | 14 | 21 | 14 | 21 | 20 |
| Agricultural sciences | 5 | 4 | 0 | 3 | 7 | 2 | 3 | 3 | 3 | 2 |
| Psychology | 5 | 11 | 6 | 16 | 13 | 13 | 13 | 15 | 20 | 11 |
| Social sciences | 7 | 12 | 13 | 7 | 12 | 9 | 13 | 7 | 5 | 6 |
| Non-S&E, total | 32 | 37 | 32 | 39 | 51 | 51 | 46 | 40 | 54 | 57 |
| Health | 1 | 0 | 2 | 3 | 0 | 2 | 7 | 2 | 3 | 3 |
| Humanities ¹ | 10 | 8 | 11 | 10 | 18 | 16 | 14 | 16 | 26 | 19 |
| Education | 17 | 26 | 16 | 23 | 25 | 23 | 19 | 17 | 21 | 27 |
| Professional/other | 4 | 3 | 3 | 3 | 8 | 10 | 6 | 5 | 4 | 8 |
| Grand total, all fields | 86 | 104 | 84 | 110 | 121 | 123 | 120 | 114 | 153 | 125 |
| U.S. citizens and permanent residents, male, Mexican American | | | | | | | | | | |
| Science and engineering, total | 57 | 67 | 84 | 79 | 73 | 87 | 89 | 95 | 91 | 136 |
| Engineering, total | 9 | 11 | 12 | 10 | 10 | 13 | 18 | 25 | 12 | 27 |
| Chemical | 1 | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 2 | 1 |
| Civil | 1 | 1 | 2 | 2 | 0 | 2 | 7 | 2 | 1 | 4 |
| Electrical | 2 | 4 | 3 | 3 | 2 | 4 | 3 | 8 | 2 | 7 |
| Mechanical | 0 | 2 | 2 | 2 | 0 | 2 | 2 | 4 | 3 | 3 |
| Other engineering | 5 | 2 | 2 | 2 | 7 | 4 | 4 | 8 | 4 | 12 |
| Sciences, total | 48 | 56 | 72 | 69 | 63 | 74 | 71 | 70 | 79 | 109 |
| Physical sciences, total | 9 | 8 | 12 | 7 | 9 | 20 | 9 | 20 | 13 | 18 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| Chemistry | 8 | 8 | 10 | 4 | 6 | 16 | 6 | 13 | 7 | 12 |
| Physics | 1 | 0 | 2 | 3 | 3 | 3 | 3 | 6 | 6 | 5 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 2 | 2 | 4 | 5 | 2 | 4 | 3 | 3 | 2 | 4 |
| Mathematics | 2 | 1 | 1 | 4 | 3 | 3 | 4 | 2 | 2 | 3 |
| Computer sciences | 0 | 0 | 0 | 3 | 1 | 2 | 1 | 1 | 2 | 3 |
| Biological sciences | 9 | 15 | 19 | 11 | 13 | 17 | 17 | 16 | 21 | 32 |
| Agricultural sciences | 6 | 7 | 4 | 4 | 3 | 4 | 3 | 1 | 2 | 7 |
| Psychology | 10 | 11 | 20 | 19 | 16 | 17 | 15 | 18 | 20 | 18 |
| Social sciences | 10 | 12 | 12 | 16 | 16 | 7 | 19 | 9 | 17 | 24 |
| Non-S&E, total | 46 | 51 | 48 | 46 | 59 | 74 | 70 | 71 | 69 | 83 |
| Health | 3 | 1 | 0 | 0 | 3 | 2 | 3 | 2 | 0 | 1 |
| Humanities ¹ | 12 | 11 | 14 | 14 | 19 | 23 | 21 | 21 | 22 | 33 |
| Education | 26 | 31 | 28 | 26 | 30 | 38 | 42 | 38 | 42 | 44 |
| Professional/other | 5 | 8 | 6 | 6 | 7 | 11 | 4 | 10 | 5 | 5 |
| Grand total, all fields | 103 | 118 | 132 | 125 | 132 | 161 | 159 | 166 | 160 | 219 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| U.S. citizens and permanent residents, male, other Hispanic | | | | | | | | | | |
| Science and engineering, total | 116 | 156 | 170 | 158 | 177 | 159 | 176 | 182 | 198 | 222 |
| Engineering, total | 24 | 30 | 31 | 36 | 36 | 37 | 37 | 42 | 43 | 54 |
| Chemical | 3 | 3 | 3 | 8 | 4 | 4 | 6 | 8 | 1 | 9 |
| Civil | 6 | 5 | 0 | 3 | 10 | 8 | 2 | 3 | 5 | 8 |
| Electrical | 10 | 7 | 12 | 9 | 8 | 14 | 8 | 11 | 15 | 19 |
| Mechanical | 0 | 2 | 3 | 7 | 4 | 4 | 5 | 6 | 3 | 10 |
| Other engineering | 5 | 13 | 13 | 9 | 10 | 7 | 16 | 14 | 19 | 8 |
| Sciences, total | 92 | 126 | 139 | 122 | 141 | 122 | 139 | 140 | 155 | 168 |
| Physical sciences, total | 16 | 24 | 31 | 31 | 38 | 30 | 31 | 26 | 22 | 19 |
| Astronomy | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 0 | 2 | 0 |
| Chemistry | 6 | 15 | 18 | 13 | 18 | 14 | 14 | 9 | 13 | 9 |
| Physics | 9 | 8 | 12 | 16 | 18 | 15 | 15 | 17 | 7 | 10 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 4 | 3 | 10 | 2 | 8 | 2 | 3 | 7 | 5 | 4 |
| Mathematics | 4 | 3 | 4 | 4 | 10 | 6 | 7 | 5 | 7 | 13 |
| Computer sciences | 1 | 2 | 8 | 3 | 5 | 1 | 1 | 4 | 7 | 9 |
| Biological sciences | 27 | 27 | 25 | 32 | 28 | 38 | 42 | 35 | 41 | 37 |
| Agricultural sciences | 4 | 6 | 8 | 7 | 5 | 7 | 10 | 5 | 14 | 13 |
| Psychology | 15 | 30 | 26 | 20 | 16 | 13 | 20 | 20 | 22 | 26 |
| Social sciences | 21 | 31 | 27 | 23 | 31 | 25 | 25 | 38 | 37 | 47 |
| Non-S&E, total | 71 | 71 | 72 | 89 | 87 | 75 | 84 | 102 | 106 | 112 |
| Health | 0 | 1 | 5 | 1 | 5 | 3 | 5 | 12 | 5 | 7 |
| Humanities ¹ | 29 | 33 | 39 | 42 | 35 | 40 | 36 | 47 | 58 | 50 |
| Education | 30 | 28 | 21 | 33 | 39 | 21 | 30 | 32 | 30 | 40 |
| Professional/other | 12 | 9 | 7 | 13 | 8 | 11 | 13 | 11 | 13 | 15 |
| Grand total, all fields | 187 | 227 | 242 | 247 | 264 | 234 | 260 | 284 | 304 | 334 |
| U.S. citizens and permanent residents, male, white | | | | | | | | | | |
| Science and engineering, total | 8,213 | 8,648 | 8,584 | 8,623 | 8,725 | 8,731 | 8,680 | 8,646 | 8,496 | 8,466 |
| Engineering, total | 1,502 | 1,614 | 1,602 | 1,640 | 1,764 | 1,715 | 1,770 | 1,913 | 1,937 | 1,857 |
| Chemical | 293 | 270 | 277 | 225 | 244 | 211 | 196 | 205 | 239 | 224 |
| Civil | 157 | 167 | 143 | 147 | 143 | 153 | 160 | 168 | 179 | 171 |
| Electrical | 378 | 411 | 444 | 447 | 504 | 494 | 522 | 521 | 519 | 466 |
| Mechanical | 224 | 267 | 236 | 307 | 296 | 311 | 313 | 353 | 341 | 331 |
| Other engineering | 450 | 499 | 502 | 514 | 577 | 546 | 579 | 666 | 659 | 665 |
| Sciences, total | 6,711 | 7,034 | 6,982 | 6,983 | 6,961 | 7,016 | 6,910 | 6,733 | 6,559 | 6,609 |
| Physical sciences, total | 1,454 | 1,623 | 1,585 | 1,574 | 1,523 | 1,617 | 1,475 | 1,457 | 1,466 | 1,459 |
| Astronomy | 63 | 70 | 77 | 84 | 79 | 78 | 92 | 101 | 109 | 96 |
| Chemistry | 872 | 969 | 926 | 901 | 846 | 872 | 760 | 755 | 771 | 781 |
| Physics | 509 | 570 | 572 | 575 | 590 | 656 | 612 | 594 | 575 | 573 |
| Other physical sciences | 10 | 14 | 10 | 14 | 8 | 11 | 11 | 7 | 11 | 9 |
| Earth, atmospheric, & ocean sciences | 388 | 385 | 415 | 353 | 345 | 381 | 356 | 340 | 350 | 323 |
| Mathematics | 281 | 293 | 335 | 332 | 352 | 361 | 409 | 373 | 342 | 373 |
| Computer sciences | 252 | 259 | 282 | 309 | 327 | 326 | 349 | 295 | 292 | 324 |
| Biological sciences | 1,784 | 1,821 | 1,871 | 1,847 | 1,835 | 1,758 | 1,772 | 1,770 | 1,750 | 1,798 |
| Agricultural sciences | 421 | 455 | 422 | 364 | 323 | 367 | 369 | 307 | 293 | 277 |
| Psychology | 1,065 | 1,075 | 991 | 1,078 | 1,096 | 1,029 | 982 | 905 | 828 | 876 |
| Social sciences | 1,066 | 1,123 | 1,081 | 1,126 | 1,160 | 1,177 | 1,198 | 1,286 | 1,238 | 1,179 |
| Non-S&E, total | 4,215 | 4,512 | 4,569 | 4,656 | 4,623 | 4,827 | 4,854 | 4,582 | 4,415 | 4,363 |
| Health | 195 | 203 | 199 | 177 | 208 | 258 | 234 | 211 | 215 | 228 |
| Humanities ¹ | 1,302 | 1,505 | 1,516 | 1,629 | 1,606 | 1,727 | 1,823 | 1,740 | 1,842 | 1,849 |
| Education | 1,911 | 2,029 | 2,002 | 1,997 | 1,992 | 1,968 | 1,858 | 1,830 | 1,607 | 1,584 |
| Professional/other | 807 | 775 | 852 | 853 | 817 | 874 | 939 | 801 | 751 | 702 |
| Grand total, all fields | 12,428 | 13,160 | 13,153 | 13,279 | 13,348 | 13,558 | 13,534 | 13,228 | 12,911 | 12,829 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| U.S. citizens and permanent residents, female | | | | | | | | | | |
| Science and engineering, total | 4,921 | 5,182 | 5,597 | 5,577 | 6,024 | 6,494 | 6,913 | 6,960 | 6,938 | 7,124 |
| Engineering, total | 275 | 276 | 316 | 328 | 348 | 448 | 520 | 523 | 509 | 447 |
| Chemical | 69 | 62 | 60 | 82 | 64 | 78 | 88 | 98 | 77 | 76 |
| Civil | 40 | 34 | 25 | 23 | 32 | 55 | 52 | 47 | 58 | 57 |
| Electrical | 36 | 47 | 48 | 67 | 80 | 88 | 120 | 105 | 106 | 91 |
| Mechanical | 19 | 24 | 37 | 25 | 36 | 54 | 49 | 60 | 55 | 50 |
| Other engineering | 111 | 109 | 146 | 131 | 136 | 173 | 211 | 213 | 213 | 173 |
| Sciences, total | 4,646 | 4,906 | 5,281 | 5,249 | 5,676 | 6,046 | 6,393 | 6,437 | 6,429 | 6,677 |
| Physical sciences, total | 437 | 470 | 454 | 514 | 521 | 625 | 708 | 610 | 585 | 599 |
| Astronomy | 13 | 18 | 7 | 15 | 23 | 21 | 25 | 35 | 26 | 28 |
| Chemistry | 365 | 383 | 368 | 401 | 401 | 464 | 537 | 439 | 429 | 458 |
| Physics | 58 | 62 | 76 | 94 | 94 | 137 | 143 | 134 | 124 | 106 |
| Other physical sciences | 1 | 7 | 3 | 4 | 3 | 3 | 3 | 2 | 6 | 7 |
| Earth, atmospheric, & ocean sciences | 120 | 118 | 157 | 147 | 120 | 144 | 144 | 130 | 160 | 169 |
| Mathematics | 101 | 93 | 112 | 117 | 164 | 151 | 183 | 145 | 172 | 197 |
| Computer sciences | 84 | 90 | 94 | 83 | 109 | 94 | 143 | 91 | 99 | 120 |
| Biological sciences | 1,276 | 1,312 | 1,390 | 1,438 | 1,584 | 1,743 | 1,860 | 1,941 | 1,909 | 1,909 |
| Agricultural sciences | 164 | 159 | 137 | 150 | 134 | 160 | 135 | 175 | 156 | 181 |
| Psychology | 1,563 | 1,772 | 1,890 | 1,780 | 1,938 | 1,967 | 2,056 | 2,183 | 2,093 | 2,204 |
| Social sciences | 901 | 892 | 1,047 | 1,020 | 1,106 | 1,162 | 1,164 | 1,162 | 1,255 | 1,298 |
| Non-S&E, total | 5,571 | 6,066 | 6,221 | 6,601 | 6,696 | 7,028 | 7,270 | 7,363 | 7,148 | 7,346 |
| Health | 531 | 517 | 587 | 629 | 679 | 722 | 720 | 724 | 735 | 817 |
| Humanities ¹ | 1,243 | 1,422 | 1,491 | 1,608 | 1,697 | 1,788 | 1,978 | 2,045 | 2,014 | 2,082 |
| Education | 3,189 | 3,429 | 3,441 | 3,670 | 3,590 | 3,756 | 3,752 | 3,824 | 3,669 | 3,653 |
| Professional/other | 608 | 698 | 702 | 694 | 730 | 762 | 820 | 770 | 730 | 794 |
| Grand total, all fields | 10,492 | 11,248 | 11,818 | 12,178 | 12,720 | 13,522 | 14,183 | 14,323 | 14,086 | 14,470 |
| U.S. citizens and permanent residents, female, American Indian/Alaskan Native | | | | | | | | | | |
| Science and engineering, total | 20 | 18 | 19 | 27 | 18 | 24 | 25 | 34 | 35 | 42 |
| Engineering, total | 2 | 0 | 2 | 3 | 0 | 2 | 0 | 2 | 3 | 4 |
| Chemical | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| Civil | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| Electrical | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Mechanical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Other engineering | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1 |
| Sciences, total | 18 | 18 | 17 | 24 | 18 | 22 | 25 | 32 | 32 | 38 |
| Physical sciences, total | 0 | 0 | 2 | 2 | 2 | 1 | 3 | 1 | 0 | 1 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chemistry | 0 | 0 | 2 | 2 | 1 | 0 | 3 | 1 | 0 | 1 |
| Physics | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Mathematics | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 |
| Computer sciences | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 0 |
| Biological sciences | 3 | 1 | 4 | 5 | 2 | 5 | 5 | 9 | 4 | 6 |
| Agricultural sciences | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 |
| Psychology | 8 | 13 | 8 | 9 | 9 | 7 | 8 | 9 | 12 | 18 |
| Social sciences | 3 | 3 | 2 | 7 | 4 | 8 | 8 | 8 | 14 | 8 |
| Non-S&E, total | 25 | 27 | 39 | 40 | 42 | 48 | 42 | 51 | 54 | 43 |
| Health | 3 | 0 | 2 | 2 | 6 | 5 | 7 | 3 | 4 | 3 |
| Humanities ¹ | 5 | 2 | 7 | 6 | 3 | 8 | 8 | 9 | 11 | 7 |
| Education | 15 | 21 | 27 | 30 | 30 | 27 | 24 | 38 | 33 | 24 |
| Professional/other | 2 | 4 | 3 | 2 | 3 | 8 | 3 | 1 | 6 | 9 |
| Grand total, all fields | 45 | 45 | 58 | 67 | 60 | 72 | 67 | 85 | 89 | 85 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------------------------------------------|------|------|------|------|------|-------|-------|-------|-------|-------|
| U.S. citizens and permanent residents, female, Asian/Pacific Islander | | | | | | | | | | |
| Science and engineering, total | 241 | 252 | 374 | 418 | 531 | 820 | 1,114 | 983 | 893 | 764 |
| Engineering, total | 34 | 33 | 49 | 61 | 61 | 119 | 170 | 133 | 118 | 98 |
| Chemical | 11 | 11 | 9 | 16 | 7 | 25 | 25 | 18 | 12 | 19 |
| Civil | 3 | 3 | 4 | 2 | 2 | 4 | 14 | 14 | 14 | 6 |
| Electrical | 8 | 6 | 5 | 21 | 25 | 31 | 46 | 29 | 39 | 31 |
| Mechanical | 1 | 3 | 3 | 4 | 3 | 24 | 23 | 17 | 16 | 11 |
| Other engineering | 11 | 10 | 28 | 18 | 24 | 35 | 62 | 55 | 37 | 31 |
| Sciences, total | 207 | 219 | 325 | 357 | 470 | 701 | 944 | 850 | 775 | 666 |
| Physical sciences, total | 36 | 42 | 48 | 80 | 97 | 178 | 211 | 145 | 133 | 101 |
| Astronomy | 2 | 2 | 0 | 2 | 2 | 1 | 4 | 4 | 1 | 3 |
| Chemistry | 23 | 29 | 36 | 56 | 72 | 129 | 146 | 108 | 93 | 72 |
| Physics | 11 | 11 | 12 | 22 | 23 | 47 | 61 | 33 | 38 | 26 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Earth, atmospheric, & ocean sciences | 4 | 1 | 6 | 8 | 8 | 17 | 28 | 12 | 20 | 19 |
| Mathematics | 3 | 7 | 18 | 19 | 36 | 26 | 50 | 36 | 28 | 27 |
| Computer sciences | 10 | 7 | 15 | 12 | 19 | 16 | 30 | 16 | 26 | 23 |
| Biological sciences | 89 | 87 | 129 | 133 | 172 | 269 | 410 | 408 | 349 | 291 |
| Agricultural sciences | 6 | 6 | 8 | 12 | 9 | 20 | 16 | 30 | 18 | 18 |
| Psychology | 27 | 31 | 44 | 39 | 51 | 77 | 78 | 93 | 94 | 86 |
| Social sciences | 32 | 38 | 57 | 54 | 78 | 98 | 121 | 110 | 107 | 101 |
| Non-S&E, total | 122 | 145 | 185 | 210 | 199 | 257 | 326 | 316 | 333 | 319 |
| Health | 9 | 22 | 23 | 30 | 23 | 46 | 42 | 42 | 50 | 50 |
| Humanities ¹ | 37 | 34 | 42 | 51 | 66 | 67 | 110 | 105 | 106 | 114 |
| Education | 59 | 65 | 85 | 96 | 86 | 107 | 118 | 114 | 128 | 108 |
| Professional/other | 17 | 24 | 35 | 33 | 24 | 37 | 56 | 55 | 49 | 47 |
| Grand total, all fields | 363 | 397 | 559 | 628 | 730 | 1,077 | 1,440 | 1,299 | 1,226 | 1,083 |
| U.S. citizens and permanent residents, female, black | | | | | | | | | | |
| Science and engineering, total | 153 | 149 | 194 | 170 | 208 | 216 | 270 | 253 | 289 | 346 |
| Engineering, total | 3 | 6 | 8 | 6 | 11 | 13 | 15 | 19 | 23 | 22 |
| Chemical | 1 | 2 | 1 | 1 | 3 | 4 | 1 | 5 | 6 | 1 |
| Civil | 0 | 0 | 2 | 0 | 2 | 2 | 3 | 1 | 0 | 2 |
| Electrical | 0 | 1 | 2 | 2 | 2 | 3 | 4 | 5 | 4 | 4 |
| Mechanical | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 3 | 1 | 0 |
| Other engineering | 2 | 3 | 2 | 3 | 4 | 3 | 6 | 5 | 12 | 15 |
| Sciences, total | 150 | 143 | 186 | 164 | 197 | 203 | 255 | 234 | 266 | 324 |
| Physical sciences, total | 7 | 7 | 5 | 6 | 10 | 13 | 18 | 13 | 10 | 29 |
| Astronomy | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Chemistry | 7 | 7 | 5 | 5 | 9 | 9 | 17 | 10 | 8 | 26 |
| Physics | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 3 | 1 | 3 |
| Other physical sciences | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 2 | 2 | 3 |
| Mathematics | 3 | 1 | 4 | 0 | 1 | 3 | 1 | 2 | 2 | 7 |
| Computer sciences | 1 | 0 | 4 | 1 | 4 | 2 | 4 | 3 | 1 | 8 |
| Biological sciences | 24 | 22 | 32 | 24 | 32 | 45 | 43 | 40 | 60 | 68 |
| Agricultural sciences | 1 | 1 | 1 | 4 | 4 | 6 | 6 | 0 | 6 | 4 |
| Psychology | 61 | 72 | 86 | 78 | 75 | 78 | 112 | 115 | 114 | 112 |
| Social sciences | 52 | 38 | 53 | 50 | 71 | 55 | 71 | 59 | 71 | 93 |
| Non-S&E, total | 357 | 422 | 420 | 427 | 493 | 510 | 592 | 563 | 554 | 632 |
| Health | 20 | 18 | 23 | 24 | 41 | 35 | 42 | 36 | 40 | 49 |
| Humanities ¹ | 36 | 35 | 48 | 43 | 42 | 55 | 61 | 66 | 71 | 71 |
| Education | 270 | 327 | 293 | 327 | 356 | 360 | 425 | 406 | 384 | 455 |
| Professional/other | 31 | 42 | 56 | 33 | 54 | 60 | 64 | 55 | 59 | 57 |
| Grand total, all fields | 510 | 571 | 614 | 597 | 701 | 726 | 862 | 816 | 843 | 978 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens and permanent residents, female, Hispanic | | | | | | | | | | |
| Science and engineering, total | 155 | 178 | 186 | 205 | 222 | 230 | 232 | 272 | 265 | 326 |
| Engineering, total | 8 | 9 | 10 | 15 | 12 | 6 | 11 | 14 | 23 | 13 |
| Chemical | 4 | 1 | 4 | 4 | 3 | 0 | 2 | 6 | 3 | 0 |
| Civil | 0 | 2 | 2 | 1 | 2 | 3 | 1 | 0 | 1 | 3 |
| Electrical | 1 | 1 | 0 | 3 | 3 | 0 | 1 | 3 | 6 | 2 |
| Mechanical | 1 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 3 | 1 |
| Other engineering | 2 | 4 | 2 | 5 | 4 | 2 | 7 | 5 | 10 | 7 |
| Sciences, total | 147 | 169 | 176 | 190 | 210 | 224 | 221 | 258 | 242 | 313 |
| Physical sciences, total | 18 | 26 | 11 | 20 | 20 | 21 | 21 | 12 | 15 | 11 |
| Astronomy | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 1 | 0 |
| Chemistry | 17 | 24 | 9 | 16 | 18 | 16 | 14 | 7 | 12 | 9 |
| Physics | 1 | 2 | 2 | 3 | 2 | 5 | 5 | 4 | 2 | 2 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 3 | 4 | 2 | 6 | 2 | 2 | 6 | 6 | 4 | 6 |
| Mathematics | 4 | 4 | 4 | 3 | 2 | 3 | 4 | 0 | 6 | 7 |
| Computer sciences | 3 | 1 | 1 | 1 | 1 | 0 | 4 | 7 | 2 | 1 |
| Biological sciences | 21 | 33 | 39 | 43 | 57 | 62 | 47 | 66 | 63 | 80 |
| Agricultural sciences | 3 | 6 | 3 | 4 | 5 | 12 | 5 | 4 | 7 | 13 |
| Psychology | 63 | 57 | 70 | 78 | 86 | 90 | 97 | 120 | 107 | 152 |
| Social sciences | 32 | 38 | 46 | 35 | 37 | 34 | 37 | 43 | 38 | 43 |
| Non-S&E, total | 163 | 210 | 223 | 222 | 234 | 282 | 290 | 269 | 301 | 307 |
| Health | 7 | 15 | 9 | 9 | 16 | 18 | 15 | 22 | 24 | 25 |
| Humanities ¹ | 49 | 75 | 72 | 63 | 73 | 89 | 82 | 90 | 97 | 90 |
| Education | 98 | 105 | 124 | 132 | 128 | 159 | 167 | 130 | 160 | 171 |
| Professional/other | 9 | 15 | 18 | 18 | 17 | 16 | 26 | 27 | 20 | 21 |
| Grand total, all fields | 318 | 388 | 409 | 427 | 456 | 512 | 522 | 541 | 566 | 633 |
| U.S. citizens and permanent residents, female, Puerto Rican | | | | | | | | | | |
| Science and engineering, total | 39 | 48 | 47 | 49 | 42 | 59 | 63 | 68 | 73 | 103 |
| Engineering, total | 1 | 2 | 2 | 3 | 2 | 0 | 2 | 5 | 4 | 1 |
| Chemical | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Civil | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Electrical | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| Mechanical | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other engineering | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 3 | 3 | 1 |
| Sciences, total | 38 | 46 | 45 | 46 | 40 | 59 | 61 | 63 | 69 | 102 |
| Physical sciences, total | 4 | 10 | 6 | 6 | 5 | 7 | 9 | 4 | 2 | 5 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Chemistry | 4 | 10 | 5 | 5 | 5 | 6 | 8 | 3 | 2 | 5 |
| Physics | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| Mathematics | 3 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 3 |
| Computer sciences | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Biological sciences | 4 | 10 | 11 | 11 | 11 | 14 | 9 | 18 | 16 | 23 |
| Agricultural sciences | 2 | 1 | 0 | 0 | 3 | 3 | 0 | 1 | 1 | 1 |
| Psychology | 16 | 15 | 14 | 19 | 11 | 30 | 31 | 33 | 37 | 58 |
| Social sciences | 9 | 9 | 14 | 9 | 9 | 5 | 10 | 6 | 11 | 8 |
| Non-S&E, total | 51 | 58 | 60 | 70 | 69 | 75 | 86 | 69 | 85 | 71 |
| Health | 3 | 6 | 1 | 1 | 3 | 4 | 5 | 5 | 7 | 4 |
| Humanities ¹ | 12 | 20 | 19 | 12 | 18 | 22 | 16 | 22 | 23 | 17 |
| Education | 35 | 30 | 36 | 53 | 45 | 45 | 50 | 34 | 49 | 44 |
| Professional/other | 1 | 2 | 4 | 4 | 3 | 4 | 15 | 8 | 6 | 6 |
| Grand total, all fields | 90 | 106 | 107 | 119 | 111 | 134 | 149 | 137 | 158 | 174 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens and permanent residents, female, Mexican American | | | | | | | | | | |
| Science and engineering, total | 38 | 37 | 42 | 41 | 49 | 58 | 61 | 54 | 68 | 87 |
| Engineering, total | 5 | 2 | 2 | 0 | 2 | 2 | 1 | 3 | 7 | 3 |
| Chemical | 3 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| Civil | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Electrical | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| Mechanical | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other engineering | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 2 | 2 |
| Sciences, total | 33 | 35 | 40 | 41 | 47 | 56 | 60 | 51 | 61 | 84 |
| Physical sciences, total | 2 | 3 | 3 | 2 | 3 | 4 | 4 | 3 | 2 | 3 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Chemistry | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 |
| Physics | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 2 | 1 | 1 |
| Mathematics | 0 | 2 | 2 | 0 | 1 | 1 | 2 | 0 | 1 | 3 |
| Computer sciences | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Biological sciences | 3 | 7 | 7 | 13 | 11 | 13 | 11 | 12 | 21 | 22 |
| Agricultural sciences | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 3 |
| Psychology | 21 | 14 | 15 | 18 | 26 | 23 | 33 | 20 | 28 | 35 |
| Social sciences | 7 | 7 | 12 | 5 | 5 | 13 | 6 | 13 | 8 | 17 |
| Non-S&E, total | 37 | 35 | 58 | 53 | 71 | 89 | 70 | 73 | 72 | 115 |
| Health | 2 | 6 | 3 | 5 | 5 | 3 | 5 | 4 | 7 | 14 |
| Humanities ¹ | 10 | 8 | 13 | 10 | 16 | 19 | 13 | 20 | 13 | 24 |
| Education | 24 | 19 | 39 | 32 | 44 | 64 | 51 | 41 | 48 | 70 |
| Professional/other | 1 | 2 | 3 | 6 | 6 | 3 | 1 | 8 | 4 | 7 |
| Grand total, all fields | 75 | 72 | 100 | 94 | 120 | 147 | 131 | 127 | 140 | 202 |
| U.S. citizens and permanent residents, female, other Hispanic | | | | | | | | | | |
| Science and engineering, total | 78 | 93 | 97 | 115 | 131 | 113 | 108 | 150 | 124 | 136 |
| Engineering, total | 2 | 5 | 6 | 12 | 8 | 4 | 8 | 6 | 12 | 9 |
| Chemical | 1 | 1 | 2 | 4 | 3 | 0 | 0 | 3 | 2 | 0 |
| Civil | 0 | 1 | 2 | 1 | 1 | 3 | 1 | 0 | 0 | 2 |
| Electrical | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 2 | 2 | 2 |
| Mechanical | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 3 | 1 |
| Other engineering | 1 | 3 | 1 | 4 | 2 | 0 | 6 | 1 | 5 | 4 |
| Sciences, total | 76 | 88 | 91 | 103 | 123 | 109 | 100 | 144 | 112 | 127 |
| Physical sciences, total | 12 | 13 | 2 | 12 | 12 | 10 | 8 | 5 | 11 | 3 |
| Astronomy | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| Chemistry | 11 | 11 | 2 | 9 | 11 | 7 | 4 | 2 | 8 | 1 |
| Physics | 1 | 2 | 0 | 2 | 1 | 3 | 4 | 2 | 2 | 2 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 3 | 2 | 2 | 4 | 2 | 2 | 4 | 4 | 2 | 2 |
| Mathematics | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 0 | 4 | 1 |
| Computer sciences | 3 | 1 | 1 | 1 | 0 | 0 | 2 | 6 | 2 | 0 |
| Biological sciences | 14 | 16 | 21 | 19 | 35 | 35 | 27 | 36 | 26 | 35 |
| Agricultural sciences | 1 | 4 | 2 | 3 | 1 | 7 | 4 | 2 | 6 | 9 |
| Psychology | 26 | 28 | 41 | 41 | 49 | 37 | 33 | 67 | 42 | 59 |
| Social sciences | 16 | 22 | 20 | 21 | 23 | 16 | 21 | 24 | 19 | 18 |
| Non-S&E, total | 75 | 117 | 105 | 99 | 94 | 118 | 134 | 127 | 144 | 121 |
| Health | 2 | 3 | 5 | 3 | 8 | 11 | 5 | 13 | 10 | 7 |
| Humanities ¹ | 27 | 47 | 40 | 41 | 39 | 48 | 53 | 48 | 61 | 49 |
| Education | 39 | 56 | 49 | 47 | 39 | 50 | 66 | 55 | 63 | 57 |
| Professional/other | 7 | 11 | 11 | 8 | 8 | 9 | 10 | 11 | 10 | 8 |
| Grand total, all fields | 153 | 210 | 202 | 214 | 225 | 231 | 242 | 277 | 268 | 257 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| U.S. citizens and permanent residents, female, white | | | | | | | | | | |
| Science and engineering, total | 4,288 | 4,522 | 4,739 | 4,703 | 5,012 | 5,158 | 5,222 | 5,353 | 5,221 | 5,463 |
| Engineering, total | 224 | 226 | 235 | 240 | 261 | 305 | 320 | 347 | 330 | 303 |
| Chemical | 52 | 48 | 45 | 59 | 51 | 48 | 60 | 69 | 52 | 52 |
| Civil | 34 | 29 | 16 | 19 | 25 | 46 | 34 | 31 | 40 | 45 |
| Electrical | 27 | 39 | 34 | 40 | 49 | 54 | 66 | 67 | 54 | 53 |
| Mechanical | 17 | 19 | 30 | 19 | 32 | 26 | 25 | 39 | 33 | 37 |
| Other engineering | 94 | 91 | 110 | 103 | 104 | 131 | 135 | 141 | 151 | 116 |
| Sciences, total | 4,064 | 4,296 | 4,504 | 4,463 | 4,751 | 4,853 | 4,902 | 5,006 | 4,891 | 5,160 |
| Physical sciences, total | 374 | 385 | 383 | 399 | 388 | 408 | 447 | 431 | 409 | 448 |
| Astronomy | 11 | 16 | 6 | 11 | 21 | 19 | 19 | 30 | 22 | 25 |
| Chemistry | 316 | 315 | 313 | 318 | 299 | 307 | 351 | 308 | 302 | 342 |
| Physics | 46 | 48 | 61 | 66 | 66 | 80 | 74 | 91 | 80 | 74 |
| Other physical sciences | 1 | 6 | 3 | 4 | 2 | 2 | 3 | 2 | 5 | 7 |
| Earth, atmospheric, & ocean sciences | 110 | 109 | 142 | 132 | 110 | 123 | 108 | 109 | 127 | 139 |
| Mathematics | 88 | 79 | 84 | 93 | 124 | 118 | 126 | 105 | 131 | 149 |
| Computer sciences | 67 | 80 | 73 | 69 | 83 | 75 | 104 | 61 | 65 | 82 |
| Biological sciences | 1,120 | 1,154 | 1,170 | 1,221 | 1,311 | 1,349 | 1,347 | 1,401 | 1,390 | 1,428 |
| Agricultural sciences | 149 | 146 | 123 | 129 | 115 | 120 | 104 | 137 | 119 | 140 |
| Psychology | 1,388 | 1,573 | 1,661 | 1,558 | 1,711 | 1,701 | 1,745 | 1,836 | 1,673 | 1,754 |
| Social sciences | 768 | 770 | 868 | 862 | 909 | 959 | 921 | 926 | 977 | 1,020 |
| Non-S&E, total | 4,854 | 5,196 | 5,293 | 5,643 | 5,692 | 5,878 | 5,963 | 6,104 | 5,681 | 5,861 |
| Health | 489 | 459 | 521 | 558 | 592 | 609 | 601 | 611 | 606 | 675 |
| Humanities ¹ | 1,097 | 1,261 | 1,305 | 1,432 | 1,503 | 1,556 | 1,700 | 1,754 | 1,671 | 1,739 |
| Education | 2,723 | 2,871 | 2,887 | 3,054 | 2,973 | 3,076 | 2,995 | 3,110 | 2,822 | 2,806 |
| Professional/other | 545 | 605 | 580 | 599 | 624 | 637 | 667 | 629 | 582 | 641 |
| Grand total, all fields | 9,142 | 9,718 | 10,032 | 10,346 | 10,704 | 11,036 | 11,185 | 11,457 | 10,902 | 11,324 |
| U.S. citizens | | | | | | | | | | |
| Science and engineering, total | 13,468 | 14,167 | 14,629 | 14,559 | 14,932 | 15,166 | 15,487 | 15,621 | 15,973 | 16,109 |
| Engineering, total | 1,864 | 1,957 | 2,086 | 2,109 | 2,228 | 2,215 | 2,386 | 2,591 | 2,710 | 2,543 |
| Chemical | 382 | 342 | 348 | 318 | 324 | 293 | 291 | 318 | 320 | 326 |
| Civil | 188 | 180 | 173 | 164 | 168 | 203 | 206 | 212 | 248 | 242 |
| Electrical | 440 | 491 | 554 | 597 | 630 | 634 | 683 | 705 | 746 | 631 |
| Mechanical | 259 | 299 | 297 | 352 | 347 | 359 | 383 | 436 | 451 | 431 |
| Other engineering | 595 | 645 | 714 | 678 | 759 | 726 | 823 | 920 | 945 | 913 |
| Sciences, total | 11,604 | 12,210 | 12,543 | 12,450 | 12,704 | 12,951 | 13,101 | 13,030 | 13,263 | 13,566 |
| Physical sciences, total | 1,984 | 2,169 | 2,120 | 2,157 | 2,093 | 2,198 | 2,137 | 2,075 | 2,122 | 2,123 |
| Astronomy | 78 | 92 | 84 | 100 | 106 | 103 | 120 | 137 | 150 | 132 |
| Chemistry | 1,298 | 1,398 | 1,351 | 1,328 | 1,272 | 1,291 | 1,238 | 1,168 | 1,229 | 1,275 |
| Physics | 597 | 660 | 671 | 709 | 704 | 789 | 764 | 761 | 728 | 700 |
| Other physical sciences | 11 | 19 | 14 | 20 | 11 | 15 | 15 | 9 | 15 | 16 |
| Earth, atmospheric, & ocean sciences | 518 | 516 | 592 | 506 | 463 | 507 | 478 | 462 | 524 | 497 |
| Mathematics | 393 | 375 | 463 | 454 | 496 | 504 | 554 | 488 | 520 | 573 |
| Computer sciences | 338 | 348 | 388 | 422 | 425 | 426 | 484 | 421 | 422 | 467 |
| Biological sciences | 3,118 | 3,191 | 3,314 | 3,328 | 3,449 | 3,422 | 3,494 | 3,547 | 3,651 | 3,726 |
| Agricultural sciences | 606 | 630 | 564 | 511 | 457 | 519 | 492 | 473 | 466 | 461 |
| Psychology | 2,683 | 2,919 | 2,953 | 2,900 | 3,071 | 3,052 | 3,083 | 3,122 | 3,019 | 3,167 |
| Social sciences | 1,964 | 2,062 | 2,149 | 2,172 | 2,250 | 2,323 | 2,379 | 2,442 | 2,539 | 2,552 |
| Non-S&E, total | 9,933 | 10,738 | 10,944 | 11,451 | 11,517 | 11,981 | 12,253 | 12,120 | 11,961 | 12,109 |
| Health | 729 | 721 | 779 | 809 | 879 | 961 | 938 | 933 | 949 | 1,035 |
| Humanities ¹ | 2,530 | 2,899 | 2,975 | 3,211 | 3,274 | 3,486 | 3,747 | 3,726 | 3,907 | 3,984 |
| Education | 5,246 | 5,634 | 5,614 | 5,852 | 5,791 | 5,864 | 5,777 | 5,866 | 5,548 | 5,529 |
| Professional/other | 1,428 | 1,484 | 1,576 | 1,579 | 1,573 | 1,670 | 1,791 | 1,595 | 1,557 | 1,561 |
| Grand total, all fields | 23,401 | 24,905 | 25,573 | 26,010 | 26,449 | 27,147 | 27,740 | 27,741 | 27,934 | 28,218 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------------------|------|------|------|------|------|------|-------|-------|-------|-------|
| U.S. citizens, American Indian/Alaskan Native | | | | | | | | | | |
| Science and engineering, total | 53 | 43 | 56 | 69 | 43 | 64 | 69 | 95 | 79 | 96 |
| Engineering, total | 7 | 4 | 6 | 11 | 2 | 6 | 10 | 14 | 16 | 13 |
| Chemical | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 4 | 3 |
| Civil | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 |
| Electrical | 0 | 0 | 2 | 4 | 0 | 1 | 2 | 2 | 4 | 3 |
| Mechanical | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 3 | 6 | 2 |
| Other engineering | 5 | 2 | 1 | 4 | 1 | 4 | 4 | 6 | 0 | 5 |
| Sciences, total | 46 | 39 | 50 | 58 | 41 | 58 | 59 | 81 | 63 | 83 |
| Physical sciences, total | 10 | 3 | 10 | 12 | 5 | 6 | 9 | 6 | 9 | 10 |
| Astronomy | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| Chemistry | 5 | 3 | 9 | 6 | 2 | 4 | 7 | 4 | 6 | 7 |
| Physics | 3 | 0 | 1 | 6 | 2 | 2 | 2 | 2 | 2 | 2 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 6 | 1 | 3 | 1 | 4 | 1 | 0 | 2 | 2 | 3 |
| Mathematics | 0 | 1 | 0 | 2 | 1 | 2 | 2 | 1 | 1 | 3 |
| Computer sciences | 2 | 0 | 1 | 2 | 1 | 1 | 0 | 4 | 1 | 3 |
| Biological sciences | 7 | 4 | 10 | 13 | 7 | 16 | 15 | 21 | 9 | 12 |
| Agricultural sciences | 2 | 4 | 4 | 0 | 1 | 1 | 2 | 5 | 5 | 9 |
| Psychology | 11 | 19 | 13 | 15 | 15 | 12 | 14 | 18 | 18 | 31 |
| Social sciences | 8 | 7 | 9 | 13 | 7 | 19 | 17 | 24 | 18 | 12 |
| Non-S&E, total | 41 | 54 | 74 | 80 | 77 | 79 | 80 | 91 | 87 | 93 |
| Health | 3 | 1 | 5 | 5 | 6 | 6 | 9 | 4 | 6 | 4 |
| Humanities ¹ | 7 | 6 | 10 | 18 | 10 | 20 | 18 | 18 | 19 | 21 |
| Education | 25 | 37 | 55 | 50 | 51 | 37 | 41 | 60 | 51 | 50 |
| Professional/other | 6 | 10 | 4 | 7 | 10 | 16 | 12 | 9 | 11 | 18 |
| Grand total, all fields | 94 | 97 | 130 | 149 | 120 | 143 | 149 | 186 | 166 | 189 |
| U.S. citizens, Asian/Pacific Islander | | | | | | | | | | |
| Science and engineering, total | 494 | 488 | 599 | 651 | 712 | 736 | 895 | 835 | 1,004 | 875 |
| Engineering, total | 174 | 157 | 187 | 214 | 217 | 202 | 255 | 271 | 289 | 244 |
| Chemical | 40 | 26 | 27 | 25 | 26 | 27 | 27 | 27 | 17 | 36 |
| Civil | 15 | 8 | 11 | 12 | 10 | 7 | 15 | 17 | 13 | 16 |
| Electrical | 48 | 51 | 67 | 95 | 86 | 97 | 92 | 108 | 128 | 87 |
| Mechanical | 25 | 27 | 26 | 35 | 34 | 28 | 39 | 40 | 47 | 36 |
| Other engineering | 46 | 45 | 56 | 47 | 61 | 43 | 82 | 79 | 84 | 69 |
| Sciences, total | 320 | 331 | 412 | 437 | 495 | 534 | 640 | 564 | 715 | 631 |
| Physical sciences, total | 75 | 86 | 86 | 108 | 121 | 122 | 148 | 108 | 153 | 119 |
| Astronomy | 0 | 1 | 0 | 2 | 3 | 4 | 4 | 5 | 6 | 6 |
| Chemistry | 42 | 54 | 63 | 65 | 76 | 70 | 91 | 56 | 83 | 71 |
| Physics | 33 | 31 | 23 | 41 | 42 | 47 | 53 | 47 | 64 | 42 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 12 | 4 | 7 | 14 | 6 | 7 | 8 | 8 | 18 | 6 |
| Mathematics | 13 | 11 | 23 | 21 | 28 | 18 | 25 | 23 | 35 | 25 |
| Computer sciences | 18 | 10 | 32 | 37 | 27 | 33 | 42 | 37 | 41 | 40 |
| Biological sciences | 122 | 116 | 160 | 134 | 190 | 194 | 229 | 237 | 255 | 250 |
| Agricultural sciences | 7 | 11 | 9 | 13 | 9 | 14 | 10 | 13 | 16 | 6 |
| Psychology | 38 | 44 | 46 | 47 | 52 | 81 | 84 | 77 | 101 | 93 |
| Social sciences | 35 | 49 | 49 | 63 | 62 | 65 | 94 | 61 | 96 | 92 |
| Non-S&E, total | 139 | 153 | 190 | 197 | 179 | 214 | 245 | 256 | 292 | 293 |
| Health | 11 | 26 | 23 | 32 | 17 | 36 | 23 | 39 | 42 | 32 |
| Humanities ¹ | 41 | 30 | 43 | 46 | 53 | 59 | 85 | 82 | 102 | 104 |
| Education | 57 | 67 | 85 | 80 | 85 | 81 | 82 | 92 | 99 | 102 |
| Professional/other | 30 | 30 | 39 | 39 | 24 | 38 | 55 | 43 | 49 | 55 |
| Grand total, all fields | 633 | 641 | 789 | 848 | 891 | 950 | 1,140 | 1,091 | 1,296 | 1,168 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------|------|------|-------|------|-------|-------|-------|-------|-------|-------|
| U.S. citizens, black | | | | | | | | | | |
| Science and engineering, total | 298 | 292 | 368 | 323 | 376 | 391 | 471 | 492 | 531 | 570 |
| Engineering, total | 24 | 28 | 43 | 32 | 41 | 44 | 54 | 59 | 82 | 76 |
| Chemical | 2 | 5 | 4 | 8 | 4 | 6 | 2 | 10 | 12 | 3 |
| Civil | 2 | 0 | 8 | 0 | 3 | 8 | 7 | 6 | 9 | 8 |
| Electrical | 8 | 7 | 16 | 12 | 13 | 14 | 20 | 17 | 27 | 22 |
| Mechanical | 5 | 5 | 3 | 3 | 2 | 4 | 8 | 9 | 10 | 13 |
| Other engineering | 7 | 11 | 12 | 9 | 19 | 12 | 17 | 17 | 24 | 30 |
| Sciences, total | 274 | 264 | 325 | 291 | 335 | 347 | 417 | 433 | 449 | 494 |
| Physical sciences, total | 25 | 19 | 25 | 21 | 29 | 33 | 37 | 46 | 45 | 50 |
| Astronomy | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 2 | 1 |
| Chemistry | 20 | 14 | 19 | 13 | 19 | 23 | 27 | 34 | 30 | 39 |
| Physics | 5 | 4 | 6 | 6 | 7 | 9 | 9 | 12 | 13 | 10 |
| Other physical sciences | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 3 | 3 | 2 | 5 | 2 | 3 | 2 | 3 | 5 | 8 |
| Mathematics | 6 | 4 | 9 | 4 | 5 | 9 | 4 | 8 | 6 | 12 |
| Computer sciences | 1 | 1 | 5 | 4 | 5 | 7 | 9 | 12 | 4 | 12 |
| Biological sciences | 46 | 37 | 51 | 47 | 64 | 67 | 91 | 82 | 100 | 98 |
| Agricultural sciences | 6 | 9 | 6 | 6 | 5 | 10 | 9 | 15 | 15 | 8 |
| Psychology | 96 | 111 | 126 | 101 | 117 | 112 | 145 | 146 | 145 | 149 |
| Social sciences | 91 | 80 | 101 | 103 | 108 | 106 | 120 | 121 | 129 | 157 |
| Non-S&E, total | 524 | 609 | 642 | 648 | 735 | 710 | 838 | 823 | 805 | 897 |
| Health | 24 | 25 | 35 | 35 | 52 | 41 | 55 | 42 | 51 | 57 |
| Humanities ¹ | 63 | 69 | 84 | 84 | 82 | 94 | 96 | 107 | 121 | 130 |
| Education | 390 | 456 | 437 | 467 | 516 | 486 | 585 | 582 | 530 | 619 |
| Professional/other | 47 | 59 | 86 | 62 | 85 | 89 | 102 | 92 | 103 | 91 |
| Grand total, all fields | 822 | 901 | 1,010 | 971 | 1,111 | 1,101 | 1,309 | 1,315 | 1,336 | 1,467 |
| U.S. citizens, Hispanic | | | | | | | | | | |
| Science and engineering, total | 313 | 390 | 410 | 433 | 444 | 463 | 486 | 531 | 568 | 682 |
| Engineering, total | 33 | 39 | 48 | 57 | 56 | 49 | 61 | 86 | 83 | 100 |
| Chemical | 5 | 7 | 10 | 10 | 10 | 5 | 12 | 15 | 6 | 10 |
| Civil | 4 | 6 | 5 | 6 | 7 | 7 | 7 | 2 | 10 | 15 |
| Electrical | 10 | 9 | 11 | 14 | 16 | 16 | 14 | 26 | 23 | 27 |
| Mechanical | 3 | 3 | 8 | 10 | 3 | 7 | 5 | 11 | 14 | 19 |
| Other engineering | 11 | 14 | 14 | 17 | 20 | 14 | 23 | 32 | 30 | 29 |
| Sciences, total | 280 | 351 | 362 | 376 | 388 | 414 | 425 | 445 | 485 | 582 |
| Physical sciences, total | 52 | 63 | 54 | 58 | 65 | 75 | 61 | 50 | 57 | 49 |
| Astronomy | 1 | 2 | 1 | 4 | 1 | 2 | 3 | 1 | 3 | 2 |
| Chemistry | 40 | 50 | 39 | 34 | 43 | 49 | 38 | 31 | 35 | 34 |
| Physics | 11 | 11 | 14 | 20 | 21 | 24 | 20 | 18 | 19 | 13 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 6 | 11 | 12 | 13 | 8 | 7 | 7 | 13 | 15 | 15 |
| Mathematics | 8 | 7 | 6 | 10 | 9 | 12 | 12 | 8 | 15 | 25 |
| Computer sciences | 4 | 4 | 11 | 7 | 5 | 5 | 6 | 12 | 15 | 13 |
| Biological sciences | 58 | 73 | 79 | 90 | 93 | 111 | 104 | 109 | 131 | 150 |
| Agricultural sciences | 12 | 14 | 7 | 9 | 14 | 16 | 10 | 9 | 14 | 25 |
| Psychology | 87 | 100 | 113 | 122 | 120 | 128 | 137 | 167 | 159 | 197 |
| Social sciences | 53 | 79 | 80 | 67 | 74 | 60 | 88 | 77 | 79 | 108 |
| Non-S&E, total | 269 | 331 | 321 | 345 | 390 | 421 | 433 | 419 | 479 | 508 |
| Health | 10 | 17 | 12 | 12 | 19 | 20 | 29 | 31 | 29 | 36 |
| Humanities ¹ | 77 | 104 | 105 | 98 | 122 | 129 | 122 | 135 | 168 | 150 |
| Education | 158 | 179 | 175 | 200 | 213 | 226 | 235 | 204 | 243 | 277 |
| Professional/other | 24 | 31 | 29 | 35 | 36 | 46 | 47 | 49 | 39 | 45 |
| Grand total, all fields | 582 | 721 | 731 | 778 | 834 | 884 | 919 | 950 | 1,047 | 1,190 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens, Puerto Rican | | | | | | | | | | |
| Science and engineering, total | 93 | 115 | 99 | 120 | 112 | 131 | 137 | 142 | 172 | 171 |
| Engineering, total | 7 | 6 | 9 | 13 | 10 | 10 | 13 | 22 | 23 | 17 |
| Chemical | 1 | 2 | 2 | 3 | 2 | 2 | 4 | 4 | 1 | 3 |
| Civil | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 1 |
| Electrical | 1 | 2 | 0 | 3 | 5 | 3 | 3 | 4 | 4 | 3 |
| Mechanical | 3 | 0 | 2 | 1 | 1 | 1 | 1 | 3 | 6 | 5 |
| Other engineering | 1 | 1 | 4 | 5 | 1 | 3 | 4 | 10 | 7 | 5 |
| Sciences, total | 86 | 109 | 90 | 107 | 102 | 121 | 124 | 120 | 149 | 154 |
| Physical sciences, total | 20 | 24 | 17 | 20 | 17 | 26 | 21 | 12 | 20 | 11 |
| Astronomy | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| Chemistry | 16 | 20 | 14 | 14 | 14 | 19 | 17 | 9 | 13 | 9 |
| Physics | 3 | 3 | 3 | 5 | 3 | 7 | 3 | 3 | 7 | 1 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 0 | 5 | 0 | 3 | 1 | 0 | 2 | 3 | 5 | 5 |
| Mathematics | 4 | 2 | 0 | 2 | 1 | 1 | 1 | 3 | 4 | 7 |
| Computer sciences | 0 | 2 | 3 | 1 | 1 | 4 | 0 | 5 | 6 | 2 |
| Biological sciences | 18 | 24 | 23 | 27 | 27 | 28 | 30 | 32 | 37 | 43 |
| Agricultural sciences | 7 | 5 | 0 | 3 | 10 | 5 | 3 | 4 | 4 | 3 |
| Psychology | 21 | 26 | 20 | 35 | 24 | 43 | 44 | 48 | 57 | 69 |
| Social sciences | 16 | 21 | 27 | 16 | 21 | 14 | 23 | 13 | 16 | 14 |
| Non-S&E, total | 83 | 95 | 92 | 109 | 120 | 126 | 132 | 109 | 139 | 128 |
| Health | 4 | 6 | 3 | 4 | 3 | 6 | 12 | 7 | 10 | 7 |
| Humanities ¹ | 22 | 28 | 30 | 22 | 36 | 38 | 30 | 38 | 49 | 36 |
| Education | 52 | 56 | 52 | 76 | 70 | 68 | 69 | 51 | 70 | 71 |
| Professional/other | 5 | 5 | 7 | 7 | 11 | 14 | 21 | 13 | 10 | 14 |
| Grand total, all fields | 176 | 210 | 191 | 229 | 232 | 257 | 269 | 251 | 311 | 299 |
| U.S. citizens, Mexican American | | | | | | | | | | |
| Science and engineering, total | 82 | 96 | 117 | 110 | 103 | 134 | 138 | 142 | 152 | 213 |
| Engineering, total | 10 | 12 | 14 | 10 | 10 | 14 | 14 | 26 | 19 | 28 |
| Chemical | 1 | 2 | 4 | 1 | 1 | 1 | 3 | 4 | 3 | 1 |
| Civil | 1 | 2 | 2 | 2 | 0 | 1 | 3 | 0 | 2 | 5 |
| Electrical | 2 | 4 | 3 | 3 | 2 | 4 | 3 | 9 | 5 | 6 |
| Mechanical | 0 | 2 | 3 | 2 | 0 | 2 | 1 | 4 | 3 | 3 |
| Other engineering | 6 | 2 | 2 | 2 | 7 | 6 | 4 | 9 | 6 | 13 |
| Sciences, total | 72 | 84 | 103 | 100 | 93 | 120 | 124 | 116 | 133 | 185 |
| Physical sciences, total | 11 | 11 | 15 | 9 | 9 | 20 | 13 | 20 | 14 | 21 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| Chemistry | 10 | 11 | 12 | 6 | 6 | 16 | 8 | 14 | 9 | 15 |
| Physics | 1 | 0 | 3 | 3 | 3 | 3 | 4 | 5 | 5 | 5 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 1 | 2 | 4 | 6 | 1 | 4 | 3 | 5 | 3 | 5 |
| Mathematics | 1 | 3 | 3 | 3 | 2 | 4 | 5 | 2 | 3 | 6 |
| Computer sciences | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 1 | 2 | 3 |
| Biological sciences | 11 | 20 | 23 | 21 | 22 | 29 | 25 | 28 | 38 | 49 |
| Agricultural sciences | 3 | 6 | 1 | 4 | 2 | 5 | 3 | 2 | 2 | 9 |
| Psychology | 30 | 25 | 34 | 36 | 40 | 38 | 47 | 38 | 48 | 51 |
| Social sciences | 15 | 17 | 23 | 19 | 17 | 20 | 25 | 20 | 23 | 41 |
| Non-S&E, total | 78 | 83 | 99 | 97 | 127 | 156 | 137 | 140 | 139 | 193 |
| Health | 4 | 7 | 3 | 5 | 7 | 3 | 8 | 6 | 7 | 15 |
| Humanities ¹ | 21 | 17 | 23 | 22 | 34 | 39 | 33 | 39 | 34 | 52 |
| Education | 48 | 49 | 64 | 58 | 73 | 100 | 91 | 78 | 89 | 114 |
| Professional/other | 5 | 10 | 9 | 12 | 13 | 14 | 5 | 17 | 9 | 12 |
| Grand total, all fields | 160 | 179 | 216 | 207 | 230 | 290 | 275 | 282 | 291 | 406 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| U.S. citizens, other Hispanic | | | | | | | | | | |
| Science and engineering, total | 138 | 179 | 194 | 203 | 229 | 198 | 211 | 247 | 244 | 298 |
| Engineering, total | 16 | 21 | 25 | 34 | 36 | 25 | 34 | 38 | 41 | 55 |
| Chemical | 3 | 3 | 4 | 6 | 7 | 2 | 5 | 7 | 2 | 6 |
| Civil | 2 | 3 | 2 | 3 | 6 | 5 | 3 | 1 | 3 | 9 |
| Electrical | 7 | 3 | 8 | 8 | 9 | 9 | 8 | 13 | 14 | 18 |
| Mechanical | 0 | 1 | 3 | 7 | 2 | 4 | 3 | 4 | 5 | 11 |
| Other engineering | 4 | 11 | 8 | 10 | 12 | 5 | 15 | 13 | 17 | 11 |
| Sciences, total | 122 | 158 | 169 | 169 | 193 | 173 | 177 | 209 | 203 | 243 |
| Physical sciences, total | 21 | 28 | 22 | 29 | 39 | 29 | 27 | 18 | 23 | 17 |
| Astronomy | 0 | 1 | 1 | 3 | 1 | 1 | 1 | 0 | 3 | 0 |
| Chemistry | 14 | 19 | 13 | 14 | 23 | 14 | 13 | 8 | 13 | 10 |
| Physics | 7 | 8 | 8 | 12 | 15 | 14 | 13 | 10 | 7 | 7 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 5 | 4 | 8 | 4 | 6 | 3 | 2 | 5 | 7 | 5 |
| Mathematics | 3 | 2 | 3 | 5 | 6 | 7 | 6 | 3 | 8 | 12 |
| Computer sciences | 4 | 2 | 8 | 4 | 4 | 1 | 3 | 6 | 7 | 8 |
| Biological sciences | 29 | 29 | 33 | 42 | 44 | 54 | 49 | 49 | 56 | 58 |
| Agricultural sciences | 2 | 3 | 6 | 2 | 2 | 6 | 4 | 3 | 8 | 13 |
| Psychology | 36 | 49 | 59 | 51 | 56 | 47 | 46 | 81 | 54 | 77 |
| Social sciences | 22 | 41 | 30 | 32 | 36 | 26 | 40 | 44 | 40 | 53 |
| Non-S&E, total | 108 | 153 | 130 | 139 | 143 | 139 | 164 | 170 | 201 | 187 |
| Health | 2 | 4 | 6 | 3 | 9 | 11 | 9 | 18 | 12 | 14 |
| Humanities ¹ | 34 | 59 | 52 | 54 | 52 | 52 | 59 | 58 | 85 | 62 |
| Education | 58 | 74 | 59 | 66 | 70 | 58 | 75 | 75 | 84 | 92 |
| Professional/other | 14 | 16 | 13 | 16 | 12 | 18 | 21 | 19 | 20 | 19 |
| Grand total, all fields | 246 | 332 | 324 | 342 | 372 | 337 | 375 | 417 | 445 | 485 |
| U.S. citizens, white | | | | | | | | | | |
| Science and engineering, total | 12,049 | 12,694 | 12,839 | 12,851 | 13,211 | 13,356 | 13,373 | 13,450 | 13,186 | 13,374 |
| Engineering, total | 1,583 | 1,690 | 1,707 | 1,750 | 1,892 | 1,886 | 1,956 | 2,123 | 2,130 | 2,028 |
| Chemical | 328 | 299 | 300 | 267 | 282 | 246 | 242 | 261 | 267 | 263 |
| Civil | 163 | 162 | 143 | 142 | 147 | 181 | 175 | 184 | 205 | 196 |
| Electrical | 360 | 413 | 430 | 457 | 507 | 503 | 538 | 541 | 523 | 481 |
| Mechanical | 218 | 261 | 244 | 300 | 303 | 316 | 319 | 369 | 358 | 346 |
| Other engineering | 514 | 555 | 590 | 584 | 653 | 640 | 682 | 768 | 777 | 742 |
| Sciences, total | 10,466 | 11,004 | 11,132 | 11,101 | 11,319 | 11,470 | 11,417 | 11,327 | 11,056 | 11,346 |
| Physical sciences, total | 1,777 | 1,939 | 1,896 | 1,917 | 1,848 | 1,944 | 1,845 | 1,825 | 1,786 | 1,826 |
| Astronomy | 73 | 86 | 81 | 91 | 97 | 94 | 109 | 127 | 128 | 113 |
| Chemistry | 1,167 | 1,249 | 1,201 | 1,192 | 1,119 | 1,139 | 1,064 | 1,028 | 1,035 | 1,089 |
| Physics | 526 | 586 | 601 | 616 | 623 | 698 | 659 | 661 | 608 | 609 |
| Other physical sciences | 11 | 18 | 13 | 18 | 9 | 13 | 13 | 9 | 15 | 15 |
| Earth, atmospheric, & ocean sciences | 484 | 488 | 546 | 469 | 440 | 486 | 452 | 430 | 465 | 449 |
| Mathematics | 351 | 346 | 403 | 407 | 445 | 455 | 507 | 440 | 443 | 487 |
| Computer sciences | 296 | 325 | 330 | 363 | 379 | 375 | 419 | 342 | 337 | 377 |
| Biological sciences | 2,832 | 2,909 | 2,965 | 2,998 | 3,056 | 3,005 | 3,023 | 3,050 | 3,052 | 3,120 |
| Agricultural sciences | 560 | 582 | 527 | 475 | 426 | 471 | 456 | 424 | 398 | 402 |
| Psychology | 2,423 | 2,599 | 2,616 | 2,580 | 2,751 | 2,694 | 2,679 | 2,698 | 2,459 | 2,578 |
| Social sciences | 1,743 | 1,816 | 1,849 | 1,892 | 1,974 | 2,040 | 2,036 | 2,118 | 2,116 | 2,107 |
| Non-S&E, total | 8,845 | 9,477 | 9,586 | 10,060 | 10,050 | 10,459 | 10,547 | 10,406 | 9,849 | 9,964 |
| Health | 675 | 648 | 691 | 714 | 782 | 846 | 807 | 805 | 806 | 881 |
| Humanities ¹ | 2,288 | 2,649 | 2,685 | 2,927 | 2,969 | 3,150 | 3,376 | 3,338 | 3,356 | 3,445 |
| Education | 4,576 | 4,842 | 4,820 | 5,007 | 4,897 | 4,989 | 4,801 | 4,879 | 4,386 | 4,334 |
| Professional/other | 1,306 | 1,338 | 1,390 | 1,412 | 1,402 | 1,474 | 1,563 | 1,384 | 1,301 | 1,304 |
| Grand total, all fields | 20,894 | 22,171 | 22,425 | 22,911 | 23,261 | 23,815 | 23,920 | 23,856 | 23,035 | 23,338 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| U.S. citizens, male | | | | | | | | | | |
| Science and engineering, total | 8,821 | 9,274 | 9,391 | 9,397 | 9,429 | 9,463 | 9,598 | 9,569 | 9,808 | 9,661 |
| Engineering, total | 1,615 | 1,709 | 1,807 | 1,826 | 1,932 | 1,872 | 2,012 | 2,176 | 2,299 | 2,173 |
| Chemical | 322 | 288 | 297 | 250 | 265 | 236 | 221 | 235 | 259 | 262 |
| Civil | 151 | 151 | 152 | 144 | 138 | 155 | 170 | 175 | 203 | 193 |
| Electrical | 411 | 446 | 510 | 542 | 573 | 570 | 604 | 623 | 672 | 565 |
| Mechanical | 240 | 276 | 263 | 329 | 314 | 327 | 355 | 391 | 405 | 390 |
| Other engineering | 491 | 548 | 585 | 561 | 642 | 584 | 662 | 752 | 760 | 763 |
| Sciences, total | 7,206 | 7,565 | 7,584 | 7,571 | 7,497 | 7,591 | 7,586 | 7,393 | 7,509 | 7,488 |
| Physical sciences, total | 1,582 | 1,747 | 1,708 | 1,710 | 1,647 | 1,745 | 1,618 | 1,608 | 1,652 | 1,616 |
| Astronomy | 67 | 76 | 77 | 87 | 86 | 83 | 99 | 106 | 125 | 109 |
| Chemistry | 956 | 1,046 | 1,015 | 971 | 920 | 946 | 829 | 835 | 880 | 887 |
| Physics | 549 | 613 | 605 | 636 | 633 | 703 | 677 | 660 | 636 | 611 |
| Other physical sciences | 10 | 12 | 11 | 16 | 8 | 13 | 13 | 7 | 11 | 9 |
| Earth, atmospheric, & ocean sciences | 404 | 398 | 444 | 368 | 351 | 382 | 366 | 348 | 382 | 351 |
| Mathematics | 300 | 293 | 370 | 357 | 372 | 382 | 422 | 383 | 382 | 403 |
| Computer sciences | 266 | 268 | 305 | 353 | 343 | 349 | 368 | 344 | 341 | 367 |
| Biological sciences | 1,928 | 1,958 | 2,024 | 1,999 | 2,000 | 1,930 | 2,006 | 1,962 | 2,024 | 2,057 |
| Agricultural sciences | 450 | 483 | 436 | 377 | 333 | 387 | 380 | 328 | 331 | 309 |
| Psychology | 1,146 | 1,195 | 1,106 | 1,176 | 1,202 | 1,143 | 1,093 | 1,017 | 988 | 1,023 |
| Social sciences | 1,130 | 1,223 | 1,191 | 1,231 | 1,249 | 1,273 | 1,333 | 1,403 | 1,409 | 1,362 |
| Non-S&E, total | 4,575 | 4,891 | 4,997 | 5,122 | 5,088 | 5,272 | 5,369 | 5,131 | 5,136 | 5,105 |
| Health | 207 | 221 | 221 | 203 | 226 | 283 | 263 | 247 | 250 | 262 |
| Humanities ¹ | 1,390 | 1,580 | 1,606 | 1,728 | 1,699 | 1,837 | 1,939 | 1,854 | 2,050 | 2,057 |
| Education | 2,132 | 2,272 | 2,255 | 2,263 | 2,282 | 2,200 | 2,149 | 2,149 | 1,969 | 1,975 |
| Professional/other | 846 | 818 | 915 | 928 | 881 | 952 | 1,018 | 881 | 867 | 811 |
| Grand total, all fields | 13,396 | 14,165 | 14,388 | 14,519 | 14,517 | 14,735 | 14,967 | 14,700 | 14,944 | 14,766 |
| U.S. citizens, male, American Indian/Alaskan Native | | | | | | | | | | |
| Science and engineering, total | 33 | 25 | 37 | 42 | 25 | 40 | 44 | 62 | 44 | 54 |
| Engineering, total | 5 | 4 | 4 | 8 | 2 | 4 | 10 | 12 | 13 | 9 |
| Chemical | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 3 | 0 |
| Civil | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Electrical | 0 | 0 | 1 | 3 | 0 | 1 | 2 | 1 | 4 | 3 |
| Mechanical | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 3 | 5 | 2 |
| Other engineering | 4 | 2 | 1 | 3 | 1 | 2 | 4 | 6 | 0 | 4 |
| Sciences, total | 28 | 21 | 33 | 34 | 23 | 36 | 34 | 50 | 31 | 45 |
| Physical sciences, total | 10 | 3 | 8 | 10 | 3 | 5 | 6 | 5 | 9 | 9 |
| Astronomy | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| Chemistry | 5 | 3 | 7 | 4 | 1 | 4 | 4 | 3 | 6 | 6 |
| Physics | 3 | 0 | 1 | 6 | 1 | 1 | 2 | 2 | 2 | 2 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 4 | 0 | 2 | 1 | 4 | 1 | 0 | 2 | 1 | 2 |
| Mathematics | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| Computer sciences | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | 3 |
| Biological sciences | 4 | 3 | 6 | 8 | 5 | 11 | 10 | 12 | 5 | 6 |
| Agricultural sciences | 1 | 4 | 4 | 0 | 1 | 1 | 2 | 2 | 5 | 7 |
| Psychology | 3 | 6 | 5 | 6 | 6 | 5 | 6 | 9 | 6 | 13 |
| Social sciences | 5 | 4 | 7 | 6 | 3 | 11 | 9 | 17 | 4 | 4 |
| Non-S&E, total | 16 | 27 | 37 | 40 | 35 | 31 | 38 | 40 | 33 | 50 |
| Health | 0 | 1 | 3 | 3 | 0 | 1 | 2 | 1 | 2 | 1 |
| Humanities ¹ | 2 | 4 | 3 | 12 | 7 | 12 | 10 | 9 | 8 | 14 |
| Education | 10 | 16 | 29 | 20 | 21 | 10 | 17 | 22 | 18 | 26 |
| Professional/other | 4 | 6 | 2 | 5 | 7 | 8 | 9 | 8 | 5 | 9 |
| Grand total, all fields | 49 | 52 | 74 | 82 | 60 | 71 | 82 | 102 | 77 | 104 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens, male, Asian/Pacific Islander | | | | | | | | | | |
| Science and engineering, total | 371 | 359 | 407 | 450 | 479 | 492 | 574 | 511 | 634 | 523 |
| Engineering, total | 151 | 137 | 160 | 181 | 193 | 171 | 203 | 221 | 244 | 192 |
| Chemical | 31 | 19 | 20 | 18 | 22 | 20 | 16 | 17 | 14 | 27 |
| Civil | 13 | 7 | 10 | 11 | 10 | 7 | 13 | 11 | 10 | 13 |
| Electrical | 43 | 47 | 64 | 83 | 79 | 86 | 80 | 95 | 112 | 69 |
| Mechanical | 24 | 25 | 23 | 33 | 33 | 23 | 35 | 36 | 39 | 29 |
| Other engineering | 40 | 39 | 43 | 36 | 49 | 35 | 59 | 62 | 69 | 54 |
| Sciences, total | 220 | 222 | 247 | 269 | 286 | 321 | 371 | 290 | 390 | 331 |
| Physical sciences, total | 62 | 67 | 66 | 72 | 79 | 88 | 99 | 75 | 108 | 85 |
| Astronomy | 0 | 1 | 0 | 1 | 2 | 4 | 3 | 3 | 6 | 5 |
| Chemistry | 34 | 41 | 48 | 36 | 39 | 43 | 52 | 33 | 52 | 49 |
| Physics | 28 | 25 | 18 | 35 | 38 | 40 | 44 | 39 | 50 | 31 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 10 | 3 | 4 | 11 | 4 | 6 | 7 | 5 | 13 | 3 |
| Mathematics | 12 | 8 | 18 | 17 | 18 | 14 | 18 | 15 | 29 | 12 |
| Computer sciences | 14 | 9 | 25 | 34 | 23 | 29 | 34 | 28 | 30 | 30 |
| Biological sciences | 75 | 77 | 91 | 71 | 102 | 114 | 128 | 107 | 130 | 131 |
| Agricultural sciences | 4 | 9 | 6 | 8 | 5 | 12 | 5 | 6 | 11 | 5 |
| Psychology | 20 | 19 | 13 | 17 | 20 | 20 | 31 | 20 | 22 | 22 |
| Social sciences | 23 | 30 | 24 | 39 | 35 | 38 | 49 | 34 | 47 | 43 |
| Non-S&E, total | 75 | 68 | 76 | 81 | 74 | 99 | 96 | 103 | 107 | 121 |
| Health | 6 | 12 | 10 | 9 | 7 | 15 | 7 | 16 | 15 | 13 |
| Humanities ¹ | 24 | 18 | 17 | 22 | 17 | 31 | 28 | 29 | 40 | 39 |
| Education | 23 | 19 | 26 | 22 | 34 | 28 | 27 | 31 | 24 | 38 |
| Professional/other | 22 | 19 | 23 | 28 | 16 | 25 | 34 | 27 | 28 | 31 |
| Grand total, all fields | 446 | 427 | 483 | 531 | 553 | 591 | 670 | 614 | 741 | 644 |
| U.S. citizens, male, black | | | | | | | | | | |
| Science and engineering, total | 148 | 153 | 190 | 162 | 180 | 192 | 219 | 254 | 259 | 238 |
| Engineering, total | 21 | 23 | 35 | 26 | 30 | 31 | 41 | 40 | 60 | 55 |
| Chemical | 1 | 3 | 3 | 7 | 1 | 2 | 1 | 5 | 6 | 2 |
| Civil | 2 | 0 | 6 | 0 | 1 | 6 | 4 | 5 | 9 | 6 |
| Electrical | 8 | 6 | 14 | 10 | 11 | 11 | 16 | 12 | 24 | 18 |
| Mechanical | 5 | 5 | 2 | 3 | 2 | 3 | 8 | 6 | 9 | 13 |
| Other engineering | 5 | 9 | 10 | 6 | 15 | 9 | 12 | 12 | 12 | 16 |
| Sciences, total | 127 | 130 | 155 | 136 | 150 | 161 | 178 | 214 | 199 | 183 |
| Physical sciences, total | 18 | 13 | 21 | 16 | 20 | 21 | 20 | 34 | 36 | 25 |
| Astronomy | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 1 |
| Chemistry | 13 | 8 | 15 | 9 | 11 | 15 | 11 | 24 | 23 | 17 |
| Physics | 5 | 4 | 6 | 6 | 7 | 5 | 8 | 10 | 12 | 7 |
| Other physical sciences | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 2 | 1 | 1 | 4 | 2 | 2 | 2 | 1 | 3 | 5 |
| Mathematics | 4 | 3 | 5 | 4 | 4 | 6 | 3 | 6 | 4 | 5 |
| Computer sciences | 0 | 1 | 1 | 3 | 2 | 5 | 5 | 9 | 3 | 4 |
| Biological sciences | 23 | 16 | 25 | 25 | 34 | 24 | 52 | 46 | 43 | 33 |
| Agricultural sciences | 5 | 8 | 5 | 5 | 3 | 7 | 4 | 15 | 10 | 7 |
| Psychology | 35 | 42 | 42 | 25 | 43 | 40 | 37 | 39 | 37 | 38 |
| Social sciences | 40 | 46 | 55 | 54 | 42 | 56 | 55 | 64 | 63 | 66 |
| Non-S&E, total | 180 | 198 | 231 | 234 | 261 | 219 | 271 | 281 | 265 | 282 |
| Health | 4 | 7 | 13 | 11 | 15 | 11 | 14 | 10 | 12 | 10 |
| Humanities ¹ | 29 | 35 | 37 | 42 | 44 | 42 | 42 | 47 | 53 | 62 |
| Education | 129 | 139 | 149 | 148 | 169 | 131 | 177 | 185 | 156 | 174 |
| Professional/other | 18 | 17 | 32 | 33 | 33 | 35 | 38 | 39 | 44 | 36 |
| Grand total, all fields | 328 | 351 | 421 | 396 | 441 | 411 | 490 | 535 | 524 | 520 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens, male, Hispanic | | | | | | | | | | |
| Science and engineering, total | 180 | 237 | 241 | 263 | 256 | 262 | 282 | 295 | 333 | 380 |
| Engineering, total | 27 | 33 | 38 | 46 | 45 | 44 | 51 | 73 | 62 | 87 |
| Chemical | 3 | 7 | 6 | 8 | 7 | 5 | 10 | 10 | 4 | 10 |
| Civil | 4 | 5 | 3 | 5 | 5 | 5 | 6 | 2 | 9 | 12 |
| Electrical | 9 | 8 | 11 | 12 | 13 | 16 | 13 | 23 | 17 | 25 |
| Mechanical | 2 | 2 | 6 | 8 | 3 | 6 | 5 | 11 | 11 | 18 |
| Other engineering | 9 | 11 | 12 | 13 | 17 | 12 | 17 | 27 | 21 | 22 |
| Sciences, total | 153 | 204 | 203 | 217 | 211 | 218 | 231 | 222 | 271 | 293 |
| Physical sciences, total | 37 | 41 | 44 | 43 | 49 | 58 | 42 | 41 | 45 | 39 |
| Astronomy | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | 2 | 2 |
| Chemistry | 25 | 30 | 31 | 23 | 29 | 36 | 24 | 25 | 25 | 25 |
| Physics | 11 | 9 | 12 | 17 | 19 | 20 | 17 | 15 | 18 | 12 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 4 | 7 | 11 | 9 | 6 | 5 | 4 | 9 | 11 | 10 |
| Mathematics | 4 | 4 | 3 | 7 | 8 | 9 | 9 | 8 | 10 | 18 |
| Computer sciences | 1 | 3 | 10 | 6 | 4 | 5 | 2 | 7 | 13 | 12 |
| Biological sciences | 43 | 45 | 44 | 55 | 47 | 61 | 68 | 58 | 74 | 79 |
| Agricultural sciences | 9 | 11 | 6 | 7 | 9 | 9 | 9 | 6 | 11 | 16 |
| Psychology | 27 | 47 | 47 | 52 | 42 | 42 | 43 | 51 | 58 | 53 |
| Social sciences | 28 | 46 | 38 | 38 | 46 | 29 | 54 | 42 | 49 | 66 |
| Non-S&E, total | 127 | 143 | 129 | 147 | 167 | 176 | 178 | 183 | 202 | 227 |
| Health | 3 | 2 | 4 | 4 | 4 | 3 | 15 | 11 | 7 | 11 |
| Humanities ¹ | 41 | 44 | 49 | 51 | 55 | 67 | 59 | 65 | 89 | 82 |
| Education | 68 | 80 | 63 | 74 | 88 | 76 | 82 | 83 | 85 | 109 |
| Professional/other | 15 | 17 | 13 | 18 | 20 | 30 | 22 | 24 | 21 | 25 |
| Grand total, all fields | 307 | 380 | 370 | 410 | 423 | 438 | 460 | 478 | 535 | 607 |
| U.S. citizens, male, Puerto Rican | | | | | | | | | | |
| Science and engineering, total | 54 | 67 | 52 | 71 | 70 | 72 | 74 | 74 | 99 | 68 |
| Engineering, total | 6 | 4 | 7 | 10 | 8 | 10 | 11 | 17 | 19 | 16 |
| Chemical | 1 | 2 | 1 | 3 | 2 | 2 | 3 | 2 | 1 | 3 |
| Civil | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 5 | 1 |
| Electrical | 1 | 1 | 0 | 2 | 4 | 3 | 3 | 4 | 3 | 3 |
| Mechanical | 2 | 0 | 2 | 0 | 1 | 1 | 1 | 3 | 6 | 5 |
| Other engineering | 1 | 0 | 3 | 4 | 1 | 3 | 3 | 7 | 4 | 4 |
| Sciences, total | 48 | 63 | 45 | 61 | 62 | 62 | 63 | 57 | 80 | 52 |
| Physical sciences, total | 16 | 14 | 11 | 14 | 12 | 19 | 12 | 8 | 18 | 6 |
| Astronomy | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Chemistry | 12 | 10 | 9 | 9 | 9 | 13 | 9 | 6 | 11 | 4 |
| Physics | 3 | 3 | 2 | 4 | 3 | 6 | 3 | 2 | 7 | 1 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 0 | 4 | 0 | 3 | 1 | 0 | 1 | 3 | 4 | 2 |
| Mathematics | 1 | 2 | 0 | 1 | 1 | 1 | 0 | 3 | 3 | 4 |
| Computer sciences | 0 | 2 | 3 | 1 | 0 | 4 | 0 | 4 | 6 | 1 |
| Biological sciences | 14 | 14 | 12 | 16 | 16 | 14 | 21 | 14 | 21 | 20 |
| Agricultural sciences | 5 | 4 | 0 | 3 | 7 | 2 | 3 | 3 | 3 | 2 |
| Psychology | 5 | 11 | 6 | 16 | 13 | 13 | 13 | 15 | 20 | 11 |
| Social sciences | 7 | 12 | 13 | 7 | 12 | 9 | 13 | 7 | 5 | 6 |
| Non-S&E, total | 32 | 37 | 32 | 39 | 51 | 51 | 46 | 40 | 54 | 57 |
| Health | 1 | 0 | 2 | 3 | 0 | 2 | 7 | 2 | 3 | 3 |
| Humanities ¹ | 10 | 8 | 11 | 10 | 18 | 16 | 14 | 16 | 26 | 19 |
| Education | 17 | 26 | 16 | 23 | 25 | 23 | 19 | 17 | 21 | 27 |
| Professional/other | 4 | 3 | 3 | 3 | 8 | 10 | 6 | 5 | 4 | 8 |
| Grand total, all fields | 86 | 104 | 84 | 110 | 121 | 123 | 120 | 114 | 153 | 125 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens, male, Mexican American | | | | | | | | | | |
| Science and engineering, total | 48 | 61 | 76 | 72 | 61 | 80 | 79 | 89 | 87 | 130 |
| Engineering, total | 7 | 10 | 12 | 10 | 9 | 12 | 13 | 23 | 12 | 25 |
| Chemical | 0 | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 2 | 1 |
| Civil | 1 | 1 | 2 | 2 | 0 | 1 | 3 | 0 | 1 | 4 |
| Electrical | 1 | 4 | 3 | 3 | 2 | 4 | 3 | 8 | 2 | 6 |
| Mechanical | 0 | 1 | 2 | 2 | 0 | 2 | 1 | 4 | 3 | 3 |
| Other engineering | 5 | 2 | 2 | 2 | 6 | 4 | 4 | 8 | 4 | 11 |
| Sciences, total | 41 | 51 | 64 | 62 | 52 | 68 | 66 | 66 | 75 | 105 |
| Physical sciences, total | 9 | 8 | 12 | 7 | 7 | 17 | 9 | 17 | 12 | 18 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| Chemistry | 8 | 8 | 10 | 4 | 5 | 14 | 6 | 12 | 7 | 12 |
| Physics | 1 | 0 | 2 | 3 | 2 | 2 | 3 | 4 | 5 | 5 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 1 | 1 | 4 | 4 | 1 | 4 | 2 | 3 | 2 | 4 |
| Mathematics | 1 | 1 | 1 | 3 | 2 | 3 | 3 | 2 | 2 | 3 |
| Computer sciences | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 2 | 3 |
| Biological sciences | 8 | 13 | 16 | 10 | 12 | 16 | 16 | 16 | 19 | 29 |
| Agricultural sciences | 3 | 6 | 1 | 3 | 1 | 4 | 2 | 1 | 2 | 6 |
| Psychology | 10 | 11 | 19 | 19 | 16 | 17 | 14 | 18 | 20 | 18 |
| Social sciences | 9 | 11 | 11 | 14 | 13 | 7 | 19 | 8 | 16 | 24 |
| Non-S&E, total | 43 | 48 | 44 | 45 | 56 | 70 | 68 | 70 | 67 | 80 |
| Health | 2 | 1 | 0 | 0 | 2 | 0 | 3 | 2 | 0 | 1 |
| Humanities ¹ | 12 | 9 | 11 | 13 | 18 | 22 | 21 | 21 | 21 | 30 |
| Education | 25 | 30 | 27 | 26 | 29 | 37 | 40 | 37 | 41 | 44 |
| Professional/other | 4 | 8 | 6 | 6 | 7 | 11 | 4 | 10 | 5 | 5 |
| Grand total, all fields | 91 | 109 | 120 | 117 | 117 | 150 | 147 | 159 | 154 | 210 |
| U.S. citizens, male, other Hispanic | | | | | | | | | | |
| Science and engineering, total | 78 | 109 | 113 | 120 | 125 | 110 | 129 | 132 | 147 | 182 |
| Engineering, total | 14 | 19 | 19 | 26 | 28 | 22 | 27 | 33 | 31 | 46 |
| Chemical | 2 | 3 | 2 | 4 | 4 | 2 | 5 | 5 | 1 | 6 |
| Civil | 2 | 3 | 0 | 2 | 5 | 3 | 2 | 1 | 3 | 7 |
| Electrical | 7 | 3 | 8 | 7 | 7 | 9 | 7 | 11 | 12 | 16 |
| Mechanical | 0 | 1 | 2 | 6 | 2 | 3 | 3 | 4 | 2 | 10 |
| Other engineering | 3 | 9 | 7 | 7 | 10 | 5 | 10 | 12 | 13 | 7 |
| Sciences, total | 64 | 90 | 94 | 94 | 97 | 88 | 102 | 99 | 116 | 136 |
| Physical sciences, total | 12 | 19 | 21 | 22 | 30 | 22 | 21 | 16 | 15 | 15 |
| Astronomy | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 0 |
| Chemistry | 5 | 12 | 12 | 10 | 15 | 9 | 9 | 7 | 7 | 9 |
| Physics | 7 | 6 | 8 | 10 | 14 | 12 | 11 | 9 | 6 | 6 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 3 | 2 | 7 | 2 | 4 | 1 | 1 | 3 | 5 | 4 |
| Mathematics | 2 | 1 | 2 | 3 | 5 | 5 | 6 | 3 | 5 | 11 |
| Computer sciences | 1 | 1 | 7 | 3 | 4 | 1 | 1 | 2 | 5 | 8 |
| Biological sciences | 21 | 18 | 16 | 29 | 19 | 31 | 31 | 28 | 34 | 30 |
| Agricultural sciences | 1 | 1 | 5 | 1 | 1 | 3 | 4 | 2 | 6 | 8 |
| Psychology | 12 | 25 | 22 | 17 | 13 | 12 | 16 | 18 | 18 | 24 |
| Social sciences | 12 | 23 | 14 | 17 | 21 | 13 | 22 | 27 | 28 | 36 |
| Non-S&E, total | 52 | 58 | 53 | 63 | 60 | 55 | 64 | 73 | 81 | 90 |
| Health | 0 | 1 | 2 | 1 | 2 | 1 | 5 | 7 | 4 | 7 |
| Humanities ¹ | 19 | 27 | 27 | 28 | 19 | 29 | 24 | 28 | 42 | 33 |
| Education | 26 | 24 | 20 | 25 | 34 | 16 | 23 | 29 | 23 | 38 |
| Professional/other | 7 | 6 | 4 | 9 | 5 | 9 | 12 | 9 | 12 | 12 |
| Grand total, all fields | 130 | 167 | 166 | 183 | 185 | 165 | 193 | 205 | 228 | 272 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| U.S. citizens, male, white | | | | | | | | | | |
| Science and engineering, total | 7,881 | 8,291 | 8,237 | 8,293 | 8,370 | 8,356 | 8,327 | 8,288 | 8,151 | 8,126 |
| Engineering, total | 1,371 | 1,474 | 1,486 | 1,523 | 1,644 | 1,595 | 1,660 | 1,799 | 1,820 | 1,753 |
| Chemical | 280 | 254 | 262 | 211 | 233 | 201 | 186 | 198 | 219 | 213 |
| Civil | 131 | 135 | 128 | 125 | 122 | 137 | 145 | 155 | 167 | 155 |
| Electrical | 337 | 374 | 397 | 419 | 462 | 453 | 479 | 481 | 477 | 439 |
| Mechanical | 201 | 242 | 217 | 281 | 272 | 291 | 295 | 332 | 326 | 314 |
| Other engineering | 422 | 469 | 482 | 487 | 555 | 513 | 555 | 633 | 631 | 632 |
| Sciences, total | 6,510 | 6,817 | 6,751 | 6,770 | 6,726 | 6,761 | 6,667 | 6,489 | 6,331 | 6,373 |
| Physical sciences, total | 1,412 | 1,571 | 1,524 | 1,535 | 1,473 | 1,557 | 1,420 | 1,419 | 1,398 | 1,397 |
| Astronomy | 62 | 70 | 75 | 81 | 78 | 75 | 91 | 98 | 106 | 91 |
| Chemistry | 857 | 942 | 896 | 885 | 828 | 843 | 732 | 738 | 746 | 762 |
| Physics | 483 | 547 | 543 | 555 | 560 | 628 | 586 | 576 | 535 | 536 |
| Other physical sciences | 10 | 12 | 10 | 14 | 7 | 11 | 11 | 7 | 11 | 8 |
| Earth, atmospheric, & ocean sciences | 377 | 379 | 409 | 339 | 332 | 366 | 346 | 326 | 341 | 316 |
| Mathematics | 268 | 272 | 324 | 319 | 334 | 344 | 388 | 347 | 323 | 350 |
| Computer sciences | 235 | 248 | 260 | 299 | 307 | 305 | 320 | 286 | 275 | 302 |
| Biological sciences | 1,745 | 1,776 | 1,825 | 1,802 | 1,782 | 1,700 | 1,722 | 1,706 | 1,708 | 1,744 |
| Agricultural sciences | 415 | 441 | 406 | 349 | 314 | 353 | 357 | 293 | 282 | 267 |
| Psychology | 1,049 | 1,059 | 980 | 1,059 | 1,081 | 1,022 | 967 | 892 | 819 | 859 |
| Social sciences | 1,009 | 1,071 | 1,023 | 1,068 | 1,103 | 1,114 | 1,147 | 1,220 | 1,185 | 1,138 |
| Non-S&E, total | 4,106 | 4,398 | 4,447 | 4,549 | 4,498 | 4,699 | 4,725 | 4,456 | 4,298 | 4,244 |
| Health | 191 | 198 | 186 | 171 | 198 | 250 | 222 | 206 | 210 | 217 |
| Humanities ¹ | 1,257 | 1,451 | 1,466 | 1,574 | 1,546 | 1,662 | 1,764 | 1,679 | 1,772 | 1,779 |
| Education | 1,882 | 1,999 | 1,968 | 1,977 | 1,958 | 1,937 | 1,833 | 1,803 | 1,587 | 1,568 |
| Professional/other | 776 | 750 | 827 | 827 | 796 | 850 | 906 | 768 | 729 | 680 |
| Grand total, all fields | 11,987 | 12,689 | 12,684 | 12,842 | 12,868 | 13,055 | 13,052 | 12,744 | 12,449 | 12,370 |
| U.S. citizens, female | | | | | | | | | | |
| Science and engineering, total | 4,647 | 4,893 | 5,238 | 5,162 | 5,503 | 5,703 | 5,889 | 6,052 | 6,165 | 6,448 |
| Engineering, total | 249 | 248 | 279 | 283 | 296 | 343 | 374 | 415 | 411 | 370 |
| Chemical | 60 | 54 | 51 | 68 | 59 | 57 | 70 | 83 | 61 | 64 |
| Civil | 37 | 29 | 21 | 20 | 30 | 48 | 36 | 37 | 45 | 49 |
| Electrical | 29 | 45 | 44 | 55 | 57 | 64 | 79 | 82 | 74 | 66 |
| Mechanical | 19 | 23 | 34 | 23 | 33 | 32 | 28 | 45 | 46 | 41 |
| Other engineering | 104 | 97 | 129 | 117 | 117 | 142 | 161 | 168 | 185 | 150 |
| Sciences, total | 4,398 | 4,645 | 4,959 | 4,879 | 5,207 | 5,360 | 5,515 | 5,637 | 5,754 | 6,078 |
| Physical sciences, total | 402 | 422 | 412 | 447 | 446 | 453 | 519 | 467 | 470 | 507 |
| Astronomy | 11 | 16 | 7 | 13 | 20 | 20 | 21 | 31 | 25 | 23 |
| Chemistry | 342 | 352 | 336 | 357 | 352 | 345 | 409 | 333 | 349 | 388 |
| Physics | 48 | 47 | 66 | 73 | 71 | 86 | 87 | 101 | 92 | 89 |
| Other physical sciences | 1 | 7 | 3 | 4 | 3 | 2 | 2 | 2 | 4 | 7 |
| Earth, atmospheric, & ocean sciences | 114 | 118 | 148 | 138 | 112 | 125 | 112 | 114 | 142 | 146 |
| Mathematics | 93 | 82 | 93 | 97 | 124 | 122 | 132 | 105 | 138 | 170 |
| Computer sciences | 72 | 80 | 83 | 69 | 82 | 77 | 116 | 77 | 81 | 100 |
| Biological sciences | 1,190 | 1,233 | 1,290 | 1,329 | 1,449 | 1,492 | 1,488 | 1,585 | 1,627 | 1,669 |
| Agricultural sciences | 156 | 147 | 128 | 134 | 124 | 132 | 112 | 145 | 135 | 152 |
| Psychology | 1,537 | 1,724 | 1,847 | 1,724 | 1,869 | 1,909 | 1,990 | 2,105 | 2,031 | 2,144 |
| Social sciences | 834 | 839 | 958 | 941 | 1,001 | 1,050 | 1,046 | 1,039 | 1,130 | 1,190 |
| Non-S&E, total | 5,358 | 5,847 | 5,947 | 6,329 | 6,429 | 6,709 | 6,884 | 6,989 | 6,825 | 7,004 |
| Health | 522 | 500 | 558 | 606 | 653 | 678 | 675 | 686 | 699 | 773 |
| Humanities ¹ | 1,140 | 1,319 | 1,369 | 1,483 | 1,575 | 1,649 | 1,808 | 1,872 | 1,857 | 1,927 |
| Education | 3,114 | 3,362 | 3,359 | 3,589 | 3,509 | 3,664 | 3,628 | 3,717 | 3,579 | 3,554 |
| Professional/other | 582 | 666 | 661 | 651 | 692 | 718 | 773 | 714 | 690 | 750 |
| Grand total, all fields | 10,005 | 10,740 | 11,185 | 11,491 | 11,932 | 12,412 | 12,773 | 13,041 | 12,990 | 13,452 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens, female, American Indian/Alaskan Native | | | | | | | | | | |
| Science and engineering, total | 20 | 18 | 19 | 27 | 18 | 24 | 25 | 33 | 35 | 42 |
| Engineering, total | 2 | 0 | 2 | 3 | 0 | 2 | 0 | 2 | 3 | 4 |
| Chemical | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| Civil | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| Electrical | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Mechanical | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Other engineering | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1 |
| Sciences, total | 18 | 18 | 17 | 24 | 18 | 22 | 25 | 31 | 32 | 38 |
| Physical sciences, total | 0 | 0 | 2 | 2 | 2 | 1 | 3 | 1 | 0 | 1 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chemistry | 0 | 0 | 2 | 2 | 1 | 0 | 3 | 1 | 0 | 1 |
| Physics | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Mathematics | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 |
| Computer sciences | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 0 |
| Biological sciences | 3 | 1 | 4 | 5 | 2 | 5 | 5 | 9 | 4 | 6 |
| Agricultural sciences | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 |
| Psychology | 8 | 13 | 8 | 9 | 9 | 7 | 8 | 9 | 12 | 18 |
| Social sciences | 3 | 3 | 2 | 7 | 4 | 8 | 8 | 7 | 14 | 8 |
| Non-S&E, total | 25 | 27 | 37 | 40 | 42 | 48 | 42 | 51 | 54 | 43 |
| Health | 3 | 0 | 2 | 2 | 6 | 5 | 7 | 3 | 4 | 3 |
| Humanities ¹ | 5 | 2 | 7 | 6 | 3 | 8 | 8 | 9 | 11 | 7 |
| Education | 15 | 21 | 26 | 30 | 30 | 27 | 24 | 38 | 33 | 24 |
| Professional/other | 2 | 4 | 2 | 2 | 3 | 8 | 3 | 1 | 6 | 9 |
| Grand total, all fields | 45 | 45 | 56 | 67 | 60 | 72 | 67 | 84 | 89 | 85 |
| U.S. citizens, female, Asian/Pacific Islander | | | | | | | | | | |
| Science and engineering, total | 123 | 129 | 192 | 201 | 233 | 244 | 321 | 324 | 370 | 352 |
| Engineering, total | 23 | 20 | 27 | 33 | 24 | 31 | 52 | 50 | 45 | 52 |
| Chemical | 9 | 7 | 7 | 7 | 4 | 7 | 11 | 10 | 3 | 9 |
| Civil | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 6 | 3 | 3 |
| Electrical | 5 | 4 | 3 | 12 | 7 | 11 | 12 | 13 | 16 | 18 |
| Mechanical | 1 | 2 | 3 | 2 | 1 | 5 | 4 | 4 | 8 | 7 |
| Other engineering | 6 | 6 | 13 | 11 | 12 | 8 | 23 | 17 | 15 | 15 |
| Sciences, total | 100 | 109 | 165 | 168 | 209 | 213 | 269 | 274 | 325 | 300 |
| Physical sciences, total | 13 | 19 | 20 | 36 | 42 | 34 | 49 | 33 | 45 | 34 |
| Astronomy | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 1 |
| Chemistry | 8 | 13 | 15 | 29 | 37 | 27 | 39 | 23 | 31 | 22 |
| Physics | 5 | 6 | 5 | 6 | 4 | 7 | 9 | 8 | 14 | 11 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 2 | 1 | 3 | 3 | 2 | 1 | 1 | 3 | 5 | 3 |
| Mathematics | 1 | 3 | 5 | 4 | 10 | 4 | 7 | 8 | 6 | 13 |
| Computer sciences | 4 | 1 | 7 | 3 | 4 | 4 | 8 | 9 | 11 | 10 |
| Biological sciences | 47 | 39 | 69 | 63 | 88 | 80 | 101 | 130 | 125 | 119 |
| Agricultural sciences | 3 | 2 | 3 | 5 | 4 | 2 | 5 | 7 | 5 | 1 |
| Psychology | 18 | 25 | 33 | 30 | 32 | 61 | 53 | 57 | 79 | 71 |
| Social sciences | 12 | 19 | 25 | 24 | 27 | 27 | 45 | 27 | 49 | 49 |
| Non-S&E, total | 64 | 85 | 114 | 116 | 105 | 115 | 149 | 153 | 185 | 172 |
| Health | 5 | 14 | 13 | 23 | 10 | 21 | 16 | 23 | 27 | 19 |
| Humanities ¹ | 17 | 12 | 26 | 24 | 36 | 28 | 57 | 53 | 62 | 65 |
| Education | 34 | 48 | 59 | 58 | 51 | 53 | 55 | 61 | 75 | 64 |
| Professional/other | 8 | 11 | 16 | 11 | 8 | 13 | 21 | 16 | 21 | 24 |
| Grand total, all fields | 187 | 214 | 306 | 317 | 338 | 359 | 470 | 477 | 555 | 524 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens, female, black | | | | | | | | | | |
| Science and engineering, total | 150 | 139 | 178 | 161 | 196 | 199 | 252 | 238 | 272 | 332 |
| Engineering, total | 3 | 5 | 8 | 6 | 11 | 13 | 13 | 19 | 22 | 21 |
| Chemical | 1 | 2 | 1 | 1 | 3 | 4 | 1 | 5 | 6 | 1 |
| Civil | 0 | 0 | 2 | 0 | 2 | 2 | 3 | 1 | 0 | 2 |
| Electrical | 0 | 1 | 2 | 2 | 2 | 3 | 4 | 5 | 3 | 4 |
| Mechanical | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 1 | 0 |
| Other engineering | 2 | 2 | 2 | 3 | 4 | 3 | 5 | 5 | 12 | 14 |
| Sciences, total | 147 | 134 | 170 | 155 | 185 | 186 | 239 | 219 | 250 | 311 |
| Physical sciences, total | 7 | 6 | 4 | 5 | 9 | 12 | 17 | 12 | 9 | 25 |
| Astronomy | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Chemistry | 7 | 6 | 4 | 4 | 8 | 8 | 16 | 10 | 7 | 22 |
| Physics | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 2 | 1 | 3 |
| Other physical sciences | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 2 | 2 | 3 |
| Mathematics | 2 | 1 | 4 | 0 | 1 | 3 | 1 | 2 | 2 | 7 |
| Computer sciences | 1 | 0 | 4 | 1 | 3 | 2 | 4 | 3 | 1 | 8 |
| Biological sciences | 23 | 21 | 26 | 22 | 30 | 43 | 39 | 36 | 57 | 65 |
| Agricultural sciences | 1 | 1 | 1 | 1 | 2 | 3 | 5 | 0 | 5 | 1 |
| Psychology | 61 | 69 | 84 | 76 | 74 | 72 | 108 | 107 | 108 | 111 |
| Social sciences | 51 | 34 | 46 | 49 | 66 | 50 | 65 | 57 | 66 | 91 |
| Non-S&E, total | 344 | 411 | 411 | 414 | 474 | 491 | 567 | 542 | 540 | 615 |
| Health | 20 | 18 | 22 | 24 | 37 | 30 | 41 | 32 | 39 | 47 |
| Humanities ¹ | 34 | 34 | 47 | 42 | 38 | 52 | 54 | 60 | 68 | 68 |
| Education | 261 | 317 | 288 | 319 | 347 | 355 | 408 | 397 | 374 | 445 |
| Professional/other | 29 | 42 | 54 | 29 | 52 | 54 | 64 | 53 | 59 | 55 |
| Grand total, all fields | 494 | 550 | 589 | 575 | 670 | 690 | 819 | 780 | 812 | 947 |
| U.S. citizens, female, Hispanic | | | | | | | | | | |
| Science and engineering, total | 133 | 153 | 169 | 170 | 188 | 201 | 204 | 236 | 235 | 302 |
| Engineering, total | 6 | 6 | 10 | 11 | 11 | 5 | 10 | 13 | 21 | 13 |
| Chemical | 2 | 0 | 4 | 2 | 3 | 0 | 2 | 5 | 2 | 0 |
| Civil | 0 | 1 | 2 | 1 | 2 | 2 | 1 | 0 | 1 | 3 |
| Electrical | 1 | 1 | 0 | 2 | 3 | 0 | 1 | 3 | 6 | 2 |
| Mechanical | 1 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 3 | 1 |
| Other engineering | 2 | 3 | 2 | 4 | 3 | 2 | 6 | 5 | 9 | 7 |
| Sciences, total | 127 | 147 | 159 | 159 | 177 | 196 | 194 | 223 | 214 | 289 |
| Physical sciences, total | 15 | 22 | 10 | 15 | 16 | 17 | 19 | 9 | 12 | 10 |
| Astronomy | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 |
| Chemistry | 15 | 20 | 8 | 11 | 14 | 13 | 14 | 6 | 10 | 9 |
| Physics | 0 | 2 | 2 | 3 | 2 | 4 | 3 | 3 | 1 | 1 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 2 | 4 | 1 | 4 | 2 | 2 | 3 | 4 | 4 | 5 |
| Mathematics | 4 | 3 | 3 | 3 | 1 | 3 | 3 | 0 | 5 | 7 |
| Computer sciences | 3 | 1 | 1 | 1 | 1 | 0 | 4 | 5 | 2 | 1 |
| Biological sciences | 15 | 28 | 35 | 35 | 46 | 50 | 36 | 51 | 57 | 71 |
| Agricultural sciences | 3 | 3 | 1 | 2 | 5 | 7 | 1 | 3 | 3 | 9 |
| Psychology | 60 | 53 | 66 | 70 | 78 | 86 | 94 | 116 | 101 | 144 |
| Social sciences | 25 | 33 | 42 | 29 | 28 | 31 | 34 | 35 | 30 | 42 |
| Non-S&E, total | 142 | 188 | 192 | 198 | 223 | 245 | 255 | 236 | 277 | 281 |
| Health | 7 | 15 | 8 | 8 | 15 | 17 | 14 | 20 | 22 | 25 |
| Humanities ¹ | 36 | 60 | 56 | 47 | 67 | 62 | 63 | 70 | 79 | 68 |
| Education | 90 | 99 | 112 | 126 | 125 | 150 | 153 | 121 | 158 | 168 |
| Professional/other | 9 | 14 | 16 | 17 | 16 | 16 | 25 | 25 | 18 | 20 |
| Grand total, all fields | 275 | 341 | 361 | 368 | 411 | 446 | 459 | 472 | 512 | 583 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| U.S. citizens, female, Puerto Rican | | | | | | | | | | |
| Science and engineering, total | 39 | 48 | 47 | 49 | 42 | 59 | 63 | 68 | 73 | 103 |
| Engineering, total | 1 | 2 | 2 | 3 | 2 | 0 | 2 | 5 | 4 | 1 |
| Chemical | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Civil | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Electrical | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| Mechanical | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other engineering | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 3 | 3 | 1 |
| Sciences, total | 38 | 46 | 45 | 46 | 40 | 59 | 61 | 63 | 69 | 102 |
| Physical sciences, total | 4 | 10 | 6 | 6 | 5 | 7 | 9 | 4 | 2 | 5 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Chemistry | 4 | 10 | 5 | 5 | 5 | 6 | 8 | 3 | 2 | 5 |
| Physics | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 |
| Mathematics | 3 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 3 |
| Computer sciences | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Biological sciences | 4 | 10 | 11 | 11 | 11 | 14 | 9 | 18 | 16 | 23 |
| Agricultural sciences | 2 | 1 | 0 | 0 | 3 | 3 | 0 | 1 | 1 | 1 |
| Psychology | 16 | 15 | 14 | 19 | 11 | 30 | 31 | 33 | 37 | 58 |
| Social sciences | 9 | 9 | 14 | 9 | 9 | 5 | 10 | 6 | 11 | 8 |
| Non-S&E, total | 51 | 58 | 60 | 70 | 69 | 75 | 86 | 69 | 85 | 71 |
| Health | 3 | 6 | 1 | 1 | 3 | 4 | 5 | 5 | 7 | 4 |
| Humanities ¹ | 12 | 20 | 19 | 12 | 18 | 22 | 16 | 22 | 23 | 17 |
| Education | 35 | 30 | 36 | 53 | 45 | 45 | 50 | 34 | 49 | 44 |
| Professional/other | 1 | 2 | 4 | 4 | 3 | 4 | 15 | 8 | 6 | 6 |
| Grand total, all fields | 90 | 106 | 107 | 119 | 111 | 134 | 149 | 137 | 158 | 174 |
| U.S. citizens, female, Mexican American | | | | | | | | | | |
| Science and engineering, total | 34 | 35 | 41 | 38 | 42 | 54 | 59 | 53 | 65 | 83 |
| Engineering, total | 3 | 2 | 2 | 0 | 1 | 2 | 1 | 3 | 7 | 3 |
| Chemical | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| Civil | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Electrical | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| Mechanical | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other engineering | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 2 | 2 |
| Sciences, total | 31 | 33 | 39 | 38 | 41 | 52 | 58 | 50 | 58 | 80 |
| Physical sciences, total | 2 | 3 | 3 | 2 | 2 | 3 | 4 | 3 | 2 | 3 |
| Astronomy | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Chemistry | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 3 |
| Physics | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 2 | 1 | 1 |
| Mathematics | 0 | 2 | 2 | 0 | 0 | 1 | 2 | 0 | 1 | 3 |
| Computer sciences | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Biological sciences | 3 | 7 | 7 | 11 | 10 | 13 | 9 | 12 | 19 | 20 |
| Agricultural sciences | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 3 |
| Psychology | 20 | 14 | 15 | 17 | 24 | 21 | 33 | 20 | 28 | 33 |
| Social sciences | 6 | 6 | 12 | 5 | 4 | 13 | 6 | 12 | 7 | 17 |
| Non-S&E, total | 35 | 35 | 55 | 52 | 71 | 86 | 69 | 70 | 72 | 113 |
| Health | 2 | 6 | 3 | 5 | 5 | 3 | 5 | 4 | 7 | 14 |
| Humanities ¹ | 9 | 8 | 12 | 9 | 16 | 17 | 12 | 18 | 13 | 22 |
| Education | 23 | 19 | 37 | 32 | 44 | 63 | 51 | 41 | 48 | 70 |
| Professional/other | 1 | 2 | 3 | 6 | 6 | 3 | 1 | 7 | 4 | 7 |
| Grand total, all fields | 69 | 70 | 96 | 90 | 113 | 140 | 128 | 123 | 137 | 196 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| U.S. citizens, female, other Hispanic | | | | | | | | | | |
| Science and engineering, total | 60 | 70 | 81 | 83 | 104 | 88 | 82 | 115 | 97 | 116 |
| Engineering, total | 2 | 2 | 6 | 8 | 8 | 3 | 7 | 5 | 10 | 9 |
| Chemical | 1 | 0 | 2 | 2 | 3 | 0 | 0 | 2 | 1 | 0 |
| Civil | 0 | 0 | 2 | 1 | 1 | 2 | 1 | 0 | 0 | 2 |
| Electrical | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 2 | 2 | 2 |
| Mechanical | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 3 | 1 |
| Other engineering | 1 | 2 | 1 | 3 | 2 | 0 | 5 | 1 | 4 | 4 |
| Sciences, total | 58 | 68 | 75 | 75 | 96 | 85 | 75 | 110 | 87 | 107 |
| Physical sciences, total | 9 | 9 | 1 | 7 | 9 | 7 | 6 | 2 | 8 | 2 |
| Astronomy | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Chemistry | 9 | 7 | 1 | 4 | 8 | 5 | 4 | 1 | 6 | 1 |
| Physics | 0 | 2 | 0 | 2 | 1 | 2 | 2 | 1 | 1 | 1 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Earth, atmospheric, & ocean sciences | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 |
| Mathematics | 1 | 1 | 1 | 2 | 1 | 2 | 0 | 0 | 3 | 1 |
| Computer sciences | 3 | 1 | 1 | 1 | 0 | 0 | 2 | 4 | 2 | 0 |
| Biological sciences | 8 | 11 | 17 | 13 | 25 | 23 | 18 | 21 | 22 | 28 |
| Agricultural sciences | 1 | 2 | 1 | 1 | 1 | 3 | 0 | 1 | 2 | 5 |
| Psychology | 24 | 24 | 37 | 34 | 43 | 35 | 30 | 63 | 36 | 53 |
| Social sciences | 10 | 18 | 16 | 15 | 15 | 13 | 18 | 17 | 12 | 17 |
| Non-S&E, total | 56 | 95 | 77 | 76 | 83 | 84 | 100 | 97 | 120 | 97 |
| Health | 2 | 3 | 4 | 2 | 7 | 10 | 4 | 11 | 8 | 7 |
| Humanities ¹ | 15 | 32 | 25 | 26 | 33 | 23 | 35 | 30 | 43 | 29 |
| Education | 32 | 50 | 39 | 41 | 36 | 42 | 52 | 46 | 61 | 54 |
| Professional/other | 7 | 10 | 9 | 7 | 7 | 9 | 9 | 10 | 8 | 7 |
| Grand total, all fields | 116 | 165 | 158 | 159 | 187 | 172 | 182 | 212 | 217 | 213 |
| U.S. citizens, female, white | | | | | | | | | | |
| Science and engineering, total | 4,168 | 4,403 | 4,602 | 4,558 | 4,841 | 5,000 | 5,046 | 5,162 | 5,035 | 5,248 |
| Engineering, total | 212 | 216 | 221 | 227 | 248 | 291 | 296 | 324 | 310 | 275 |
| Chemical | 48 | 45 | 38 | 56 | 49 | 45 | 56 | 63 | 48 | 50 |
| Civil | 32 | 27 | 15 | 17 | 25 | 44 | 30 | 29 | 38 | 41 |
| Electrical | 23 | 39 | 33 | 38 | 45 | 50 | 59 | 60 | 46 | 42 |
| Mechanical | 17 | 19 | 27 | 19 | 31 | 25 | 24 | 37 | 32 | 32 |
| Other engineering | 92 | 86 | 108 | 97 | 98 | 127 | 127 | 135 | 146 | 110 |
| Sciences, total | 3,956 | 4,187 | 4,381 | 4,331 | 4,593 | 4,709 | 4,750 | 4,838 | 4,725 | 4,973 |
| Physical sciences, total | 365 | 368 | 372 | 382 | 375 | 387 | 425 | 406 | 388 | 429 |
| Astronomy | 11 | 16 | 6 | 10 | 19 | 19 | 18 | 29 | 22 | 22 |
| Chemistry | 310 | 307 | 305 | 307 | 291 | 296 | 332 | 290 | 289 | 327 |
| Physics | 43 | 39 | 58 | 61 | 63 | 70 | 73 | 85 | 73 | 73 |
| Other physical sciences | 1 | 6 | 3 | 4 | 2 | 2 | 2 | 2 | 4 | 7 |
| Earth, atmospheric, & ocean sciences | 107 | 109 | 137 | 130 | 108 | 120 | 106 | 104 | 124 | 133 |
| Mathematics | 83 | 74 | 79 | 88 | 111 | 111 | 119 | 93 | 120 | 137 |
| Computer sciences | 61 | 77 | 70 | 64 | 72 | 70 | 99 | 56 | 62 | 75 |
| Biological sciences | 1,087 | 1,133 | 1,140 | 1,196 | 1,274 | 1,305 | 1,301 | 1,344 | 1,344 | 1,376 |
| Agricultural sciences | 145 | 141 | 121 | 126 | 112 | 118 | 99 | 131 | 116 | 135 |
| Psychology | 1,374 | 1,540 | 1,636 | 1,521 | 1,670 | 1,672 | 1,712 | 1,806 | 1,640 | 1,719 |
| Social sciences | 734 | 745 | 826 | 824 | 871 | 926 | 889 | 898 | 931 | 969 |
| Non-S&E, total | 4,739 | 5,079 | 5,139 | 5,511 | 5,552 | 5,760 | 5,822 | 5,950 | 5,551 | 5,720 |
| Health | 484 | 450 | 505 | 543 | 584 | 596 | 585 | 599 | 596 | 664 |
| Humanities ¹ | 1,031 | 1,198 | 1,219 | 1,353 | 1,423 | 1,488 | 1,612 | 1,659 | 1,584 | 1,666 |
| Education | 2,694 | 2,843 | 2,852 | 3,030 | 2,939 | 3,052 | 2,968 | 3,076 | 2,799 | 2,766 |
| Professional/other | 530 | 588 | 563 | 585 | 606 | 624 | 657 | 616 | 572 | 624 |
| Grand total, all fields | 8,907 | 9,482 | 9,741 | 10,069 | 10,393 | 10,760 | 10,868 | 11,112 | 10,586 | 10,968 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Non-U.S. citizens with permanent visas | | | | | | | | | | |
| Science and engineering, total | 1,124 | 1,197 | 1,285 | 1,383 | 1,641 | 3,021 | 3,509 | 3,007 | 2,277 | 2,016 |
| Engineering, total | 365 | 389 | 388 | 411 | 469 | 838 | 956 | 792 | 593 | 478 |
| Chemical | 62 | 50 | 51 | 60 | 53 | 87 | 90 | 74 | 88 | 46 |
| Civil | 59 | 61 | 40 | 51 | 59 | 89 | 103 | 93 | 78 | 51 |
| Electrical | 99 | 108 | 132 | 122 | 165 | 265 | 288 | 221 | 187 | 166 |
| Mechanical | 66 | 69 | 62 | 74 | 87 | 179 | 180 | 152 | 82 | 81 |
| Other engineering | 79 | 101 | 103 | 104 | 105 | 218 | 295 | 252 | 158 | 134 |
| Sciences, total | 759 | 808 | 897 | 972 | 1,172 | 2,183 | 2,553 | 2,215 | 1,684 | 1,538 |
| Physical sciences, total | 147 | 172 | 180 | 200 | 237 | 591 | 704 | 493 | 366 | 312 |
| Astronomy | 4 | 4 | 2 | 6 | 5 | 9 | 21 | 12 | 7 | 16 |
| Chemistry | 85 | 99 | 110 | 113 | 128 | 325 | 386 | 293 | 205 | 180 |
| Physics | 57 | 65 | 68 | 81 | 102 | 255 | 295 | 187 | 152 | 114 |
| Other physical sciences | 1 | 4 | 0 | 0 | 2 | 2 | 2 | 1 | 2 | 2 |
| Earth, atmospheric, & ocean sciences | 29 | 19 | 26 | 35 | 41 | 106 | 116 | 96 | 70 | 62 |
| Mathematics | 35 | 47 | 55 | 53 | 94 | 153 | 217 | 158 | 99 | 93 |
| Computer sciences | 58 | 55 | 63 | 67 | 84 | 117 | 132 | 92 | 91 | 84 |
| Biological sciences | 182 | 189 | 211 | 240 | 303 | 666 | 835 | 818 | 583 | 553 |
| Agricultural sciences | 45 | 57 | 56 | 62 | 49 | 97 | 106 | 103 | 83 | 79 |
| Psychology | 54 | 73 | 65 | 86 | 90 | 84 | 101 | 104 | 89 | 92 |
| Social sciences | 209 | 196 | 241 | 229 | 274 | 369 | 342 | 351 | 303 | 263 |
| Non-S&E, total | 502 | 501 | 572 | 597 | 618 | 726 | 810 | 758 | 651 | 680 |
| Health | 27 | 35 | 60 | 46 | 60 | 89 | 107 | 83 | 69 | 81 |
| Humanities ¹ | 186 | 183 | 219 | 229 | 238 | 280 | 308 | 319 | 289 | 304 |
| Education | 164 | 153 | 174 | 165 | 177 | 199 | 218 | 196 | 164 | 171 |
| Professional/other | 125 | 130 | 119 | 157 | 143 | 158 | 177 | 160 | 129 | 124 |
| Grand total, all fields | 1,626 | 1,698 | 1,857 | 1,980 | 2,259 | 3,747 | 4,319 | 3,765 | 2,928 | 2,696 |
| Non-U.S. citizens with permanent visas, male | | | | | | | | | | |
| Science and engineering, total | 850 | 908 | 926 | 968 | 1,120 | 2,230 | 2,485 | 2,099 | 1,504 | 1,340 |
| Engineering, total | 339 | 361 | 351 | 366 | 417 | 733 | 810 | 684 | 495 | 401 |
| Chemical | 53 | 42 | 42 | 46 | 48 | 66 | 72 | 59 | 72 | 34 |
| Civil | 56 | 56 | 36 | 48 | 57 | 82 | 87 | 83 | 65 | 43 |
| Electrical | 92 | 106 | 128 | 110 | 142 | 241 | 247 | 198 | 155 | 141 |
| Mechanical | 66 | 68 | 59 | 72 | 84 | 157 | 159 | 137 | 73 | 72 |
| Other engineering | 72 | 89 | 86 | 90 | 86 | 187 | 245 | 207 | 130 | 111 |
| Sciences, total | 511 | 547 | 575 | 602 | 703 | 1,497 | 1,675 | 1,415 | 1,009 | 939 |
| Physical sciences, total | 112 | 124 | 138 | 133 | 162 | 419 | 515 | 350 | 251 | 220 |
| Astronomy | 2 | 2 | 2 | 4 | 2 | 8 | 17 | 8 | 6 | 11 |
| Chemistry | 62 | 68 | 78 | 69 | 79 | 206 | 258 | 187 | 125 | 110 |
| Physics | 47 | 50 | 58 | 60 | 79 | 204 | 239 | 154 | 120 | 97 |
| Other physical sciences | 1 | 4 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 2 |
| Earth, atmospheric, & ocean sciences | 23 | 19 | 17 | 26 | 33 | 87 | 84 | 80 | 52 | 39 |
| Mathematics | 27 | 36 | 36 | 33 | 54 | 124 | 166 | 118 | 65 | 66 |
| Computer sciences | 46 | 45 | 52 | 53 | 57 | 100 | 105 | 78 | 73 | 64 |
| Biological sciences | 96 | 110 | 111 | 131 | 168 | 415 | 463 | 462 | 301 | 313 |
| Agricultural sciences | 37 | 45 | 47 | 46 | 39 | 69 | 83 | 73 | 62 | 50 |
| Psychology | 28 | 25 | 22 | 30 | 21 | 26 | 35 | 26 | 27 | 32 |
| Social sciences | 142 | 143 | 152 | 150 | 169 | 257 | 224 | 228 | 178 | 155 |
| Non-S&E, total | 289 | 282 | 298 | 325 | 351 | 407 | 424 | 384 | 328 | 338 |
| Health | 18 | 18 | 31 | 23 | 34 | 45 | 62 | 45 | 33 | 37 |
| Humanities ¹ | 83 | 80 | 97 | 104 | 116 | 141 | 138 | 146 | 132 | 149 |
| Education | 89 | 86 | 92 | 84 | 96 | 107 | 94 | 89 | 74 | 72 |
| Professional/other | 99 | 98 | 78 | 114 | 105 | 114 | 130 | 104 | 89 | 80 |
| Grand total, all fields | 1,139 | 1,190 | 1,224 | 1,293 | 1,471 | 2,637 | 2,909 | 2,483 | 1,832 | 1,678 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Non-U.S. citizens with permanent visas, female | | | | | | | | | | |
| Science and engineering, total | 274 | 289 | 359 | 415 | 521 | 791 | 1,024 | 908 | 773 | 676 |
| Engineering, total | 26 | 28 | 37 | 45 | 52 | 105 | 146 | 108 | 98 | 77 |
| Chemical | 9 | 8 | 9 | 14 | 5 | 21 | 18 | 15 | 16 | 12 |
| Civil | 3 | 5 | 4 | 3 | 2 | 7 | 16 | 10 | 13 | 8 |
| Electrical | 7 | 2 | 4 | 12 | 23 | 24 | 41 | 23 | 32 | 25 |
| Mechanical | 0 | 1 | 3 | 2 | 3 | 22 | 21 | 15 | 9 | 9 |
| Other engineering | 7 | 12 | 17 | 14 | 19 | 31 | 50 | 45 | 28 | 23 |
| Sciences, total | 248 | 261 | 322 | 370 | 469 | 686 | 878 | 800 | 675 | 599 |
| Physical sciences, total | 35 | 48 | 42 | 67 | 75 | 172 | 189 | 143 | 115 | 92 |
| Astronomy | 2 | 2 | 0 | 2 | 3 | 1 | 4 | 4 | 1 | 5 |
| Chemistry | 23 | 31 | 32 | 44 | 49 | 119 | 128 | 106 | 80 | 70 |
| Physics | 10 | 15 | 10 | 21 | 23 | 51 | 56 | 33 | 32 | 17 |
| Other physical sciences | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 |
| Earth, atmospheric, & ocean sciences | 6 | 0 | 9 | 9 | 8 | 19 | 32 | 16 | 18 | 23 |
| Mathematics | 8 | 11 | 19 | 20 | 40 | 29 | 51 | 40 | 34 | 27 |
| Computer sciences | 12 | 10 | 11 | 14 | 27 | 17 | 27 | 14 | 18 | 20 |
| Biological sciences | 86 | 79 | 100 | 109 | 135 | 251 | 372 | 356 | 282 | 240 |
| Agricultural sciences | 8 | 12 | 9 | 16 | 10 | 28 | 23 | 30 | 21 | 29 |
| Psychology | 26 | 48 | 43 | 56 | 69 | 58 | 66 | 78 | 62 | 60 |
| Social sciences | 67 | 53 | 89 | 79 | 105 | 112 | 118 | 123 | 125 | 108 |
| Non-S&E, total | 213 | 219 | 274 | 272 | 267 | 319 | 386 | 374 | 323 | 342 |
| Health | 9 | 17 | 29 | 23 | 26 | 44 | 45 | 38 | 36 | 44 |
| Humanities ¹ | 103 | 103 | 122 | 125 | 122 | 139 | 170 | 173 | 157 | 155 |
| Education | 75 | 67 | 82 | 81 | 81 | 92 | 124 | 107 | 90 | 99 |
| Professional/other | 26 | 32 | 41 | 43 | 38 | 44 | 47 | 56 | 40 | 44 |
| Grand total, all fields | 487 | 508 | 633 | 687 | 788 | 1,110 | 1,410 | 1,282 | 1,096 | 1,018 |
| Non-U.S. citizens with temporary visas | | | | | | | | | | |
| Science and engineering, total | 5,391 | 6,571 | 7,641 | 8,092 | 8,113 | 7,521 | 6,994 | 7,802 | 6,963 | 7,143 |
| Engineering, total | 1,940 | 2,277 | 2,633 | 2,743 | 2,784 | 2,653 | 2,524 | 2,716 | 2,391 | 2,392 |
| Chemical | 236 | 250 | 281 | 339 | 336 | 336 | 318 | 399 | 319 | 353 |
| Civil | 262 | 284 | 353 | 357 | 380 | 385 | 337 | 369 | 290 | 284 |
| Electrical | 498 | 602 | 690 | 725 | 703 | 735 | 712 | 749 | 666 | 660 |
| Mechanical | 358 | 465 | 493 | 538 | 554 | 459 | 437 | 430 | 425 | 427 |
| Other engineering | 586 | 676 | 816 | 784 | 811 | 738 | 720 | 769 | 691 | 668 |
| Sciences, total | 3,451 | 4,294 | 5,008 | 5,349 | 5,329 | 4,868 | 4,470 | 5,086 | 4,572 | 4,751 |
| Physical sciences, total | 890 | 1,073 | 1,257 | 1,346 | 1,263 | 1,107 | 930 | 1,139 | 1,017 | 1,113 |
| Astronomy | 26 | 30 | 37 | 28 | 34 | 32 | 28 | 42 | 34 | 45 |
| Chemistry | 461 | 530 | 689 | 729 | 675 | 597 | 493 | 613 | 561 | 610 |
| Physics | 401 | 507 | 525 | 581 | 550 | 471 | 399 | 481 | 421 | 454 |
| Other physical sciences | 2 | 6 | 6 | 8 | 4 | 7 | 10 | 3 | 1 | 4 |
| Earth, atmospheric, & ocean sciences | 122 | 171 | 185 | 236 | 235 | 197 | 173 | 205 | 211 | 200 |
| Mathematics | 346 | 424 | 506 | 511 | 517 | 448 | 382 | 441 | 416 | 419 |
| Computer sciences | 178 | 271 | 340 | 365 | 348 | 343 | 365 | 376 | 315 | 309 |
| Biological sciences | 608 | 853 | 1,059 | 1,159 | 1,246 | 1,058 | 969 | 1,240 | 1,219 | 1,230 |
| Agricultural sciences | 355 | 440 | 435 | 472 | 447 | 453 | 429 | 442 | 352 | 418 |
| Psychology | 106 | 117 | 133 | 156 | 148 | 151 | 164 | 181 | 128 | 151 |
| Social sciences | 846 | 945 | 1,093 | 1,104 | 1,125 | 1,111 | 1,058 | 1,062 | 914 | 911 |
| Non-S&E, total | 1,257 | 1,522 | 1,670 | 1,861 | 1,819 | 1,885 | 1,816 | 1,808 | 1,515 | 1,499 |
| Health | 134 | 166 | 171 | 226 | 214 | 230 | 245 | 267 | 253 | 239 |
| Humanities ¹ | 283 | 354 | 444 | 495 | 466 | 529 | 548 | 522 | 465 | 456 |
| Education | 452 | 501 | 503 | 553 | 546 | 537 | 502 | 477 | 365 | 424 |
| Professional/other | 388 | 501 | 552 | 587 | 593 | 589 | 521 | 542 | 432 | 380 |
| Grand total, all fields | 6,648 | 8,093 | 9,311 | 9,953 | 9,932 | 9,406 | 8,810 | 9,610 | 8,478 | 8,642 |

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Non-U.S. citizens with temporary visas, male | | | | | | | | | | |
| Science and engineering, total | 4,609 | 5,590 | 6,412 | 6,741 | 6,658 | 6,201 | 5,748 | 6,305 | 5,565 | 5,553 |
| Engineering, total | 1,850 | 2,157 | 2,484 | 2,574 | 2,623 | 2,475 | 2,365 | 2,488 | 2,194 | 2,144 |
| Chemical | 225 | 234 | 259 | 308 | 309 | 301 | 297 | 354 | 278 | 299 |
| Civil | 250 | 271 | 337 | 330 | 358 | 360 | 314 | 338 | 270 | 252 |
| Electrical | 469 | 573 | 659 | 679 | 660 | 679 | 668 | 697 | 631 | 610 |
| Mechanical | 349 | 452 | 473 | 518 | 535 | 445 | 424 | 414 | 398 | 400 |
| Other engineering | 557 | 627 | 756 | 739 | 761 | 690 | 662 | 685 | 617 | 583 |
| Sciences, total | 2,759 | 3,433 | 3,928 | 4,167 | 4,035 | 3,726 | 3,383 | 3,817 | 3,371 | 3,409 |
| Physical sciences, total | 743 | 895 | 1,041 | 1,098 | 1,015 | 908 | 770 | 930 | 817 | 854 |
| Astronomy | 22 | 28 | 30 | 24 | 32 | 28 | 24 | 36 | 25 | 29 |
| Chemistry | 355 | 421 | 547 | 556 | 503 | 440 | 378 | 465 | 423 | 420 |
| Physics | 365 | 441 | 460 | 510 | 477 | 433 | 360 | 427 | 369 | 403 |
| Other physical sciences | 1 | 5 | 4 | 8 | 3 | 7 | 8 | 2 | 0 | 2 |
| Earth, atmospheric, & ocean sciences | 109 | 153 | 165 | 198 | 202 | 158 | 151 | 169 | 178 | 161 |
| Mathematics | 299 | 363 | 420 | 427 | 422 | 364 | 304 | 358 | 345 | 344 |
| Computer sciences | 160 | 256 | 317 | 329 | 322 | 302 | 322 | 335 | 279 | 289 |
| Biological sciences | 400 | 582 | 694 | 787 | 809 | 704 | 635 | 799 | 748 | 738 |
| Agricultural sciences | 300 | 359 | 366 | 391 | 357 | 366 | 340 | 340 | 271 | 323 |
| Psychology | 60 | 62 | 77 | 81 | 64 | 71 | 79 | 87 | 55 | 62 |
| Social sciences | 688 | 763 | 848 | 856 | 844 | 853 | 782 | 799 | 678 | 638 |
| Non-S&E, total | 835 | 1,042 | 1,105 | 1,222 | 1,205 | 1,129 | 1,110 | 1,090 | 898 | 877 |
| Health | 87 | 101 | 101 | 159 | 138 | 115 | 142 | 151 | 128 | 132 |
| Humanities ¹ | 171 | 211 | 255 | 280 | 275 | 294 | 309 | 280 | 257 | 234 |
| Education | 264 | 306 | 288 | 299 | 306 | 269 | 244 | 242 | 179 | 210 |
| Professional/other | 313 | 424 | 461 | 484 | 486 | 451 | 415 | 417 | 334 | 301 |
| Grand total, all fields | 5,444 | 6,632 | 7,517 | 7,963 | 7,863 | 7,330 | 6,858 | 7,395 | 6,463 | 6,430 |
| Non-U.S. citizens with temporary visas, female | | | | | | | | | | |
| Science and engineering, total | 782 | 981 | 1,229 | 1,351 | 1,455 | 1,320 | 1,246 | 1,497 | 1,398 | 1,590 |
| Engineering, total | 90 | 120 | 149 | 169 | 161 | 178 | 159 | 228 | 197 | 248 |
| Chemical | 11 | 16 | 22 | 31 | 27 | 35 | 21 | 45 | 41 | 54 |
| Civil | 12 | 13 | 16 | 27 | 22 | 25 | 23 | 31 | 20 | 32 |
| Electrical | 29 | 29 | 31 | 46 | 43 | 56 | 44 | 52 | 35 | 50 |
| Mechanical | 9 | 13 | 20 | 20 | 19 | 14 | 13 | 16 | 27 | 27 |
| Other engineering | 29 | 49 | 60 | 45 | 50 | 48 | 58 | 84 | 74 | 85 |
| Sciences, total | 692 | 861 | 1,080 | 1,182 | 1,294 | 1,142 | 1,087 | 1,269 | 1,201 | 1,342 |
| Physical sciences, total | 147 | 178 | 216 | 248 | 248 | 199 | 160 | 209 | 200 | 259 |
| Astronomy | 4 | 2 | 7 | 4 | 2 | 4 | 4 | 6 | 9 | 16 |
| Chemistry | 106 | 109 | 142 | 173 | 172 | 157 | 115 | 148 | 138 | 190 |
| Physics | 36 | 66 | 65 | 71 | 73 | 38 | 39 | 54 | 52 | 51 |
| Other physical sciences | 1 | 1 | 2 | 0 | 1 | 0 | 2 | 1 | 1 | 2 |
| Earth, atmospheric, & ocean sciences | 13 | 18 | 20 | 38 | 33 | 39 | 22 | 36 | 33 | 39 |
| Mathematics | 47 | 61 | 86 | 84 | 95 | 84 | 78 | 83 | 71 | 75 |
| Computer sciences | 18 | 15 | 23 | 36 | 26 | 41 | 43 | 41 | 36 | 20 |
| Biological sciences | 208 | 271 | 365 | 372 | 437 | 354 | 334 | 441 | 471 | 492 |
| Agricultural sciences | 55 | 81 | 69 | 81 | 90 | 87 | 89 | 102 | 81 | 95 |
| Psychology | 46 | 55 | 56 | 75 | 84 | 80 | 85 | 94 | 73 | 89 |
| Social sciences | 158 | 182 | 245 | 248 | 281 | 258 | 276 | 263 | 236 | 273 |
| Non-S&E, total | 422 | 480 | 565 | 639 | 614 | 756 | 706 | 718 | 617 | 622 |
| Health | 47 | 65 | 70 | 67 | 76 | 115 | 103 | 116 | 125 | 107 |
| Humanities ¹ | 112 | 143 | 189 | 215 | 191 | 235 | 239 | 242 | 208 | 222 |
| Education | 188 | 195 | 215 | 254 | 240 | 268 | 258 | 235 | 186 | 214 |
| Professional/other | 75 | 77 | 91 | 103 | 107 | 138 | 106 | 125 | 98 | 79 |
| Grand total, all fields | 1,204 | 1,461 | 1,794 | 1,990 | 2,069 | 2,076 | 1,952 | 2,215 | 2,015 | 2,212 |

¹ Categories differ from those published by other Federal sponsors and the National Research Council in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

NOTE: Details may not add to totals because of persons with unknown race/ethnicity.

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Total | | | | | | | | | |
| Science and engineering, total | 21,732 | 22,868 | 24,023 | 24,675 | 25,443 | 26,205 | 26,535 | 27,229 | 27,180 | 27,272 |
| Engineering, total | 4,543 | 4,894 | 5,214 | 5,438 | 5,698 | 5,822 | 6,008 | 6,305 | 6,098 | 5,919 |
| Aeronautical/astronautical | 178 | 192 | 207 | 234 | 228 | 230 | 252 | 287 | 270 | 242 |
| Chemical | 712 | 658 | 691 | 725 | 737 | 725 | 708 | 798 | 767 | 774 |
| Civil | 538 | 553 | 575 | 594 | 624 | 684 | 656 | 697 | 655 | 650 |
| Electrical | 1,137 | 1,276 | 1,405 | 1,483 | 1,543 | 1,673 | 1,731 | 1,740 | 1,718 | 1,593 |
| Industrial | 162 | 151 | 165 | 196 | 236 | 228 | 284 | 258 | 242 | 227 |
| Materials/metallurgical | 380 | 440 | 489 | 485 | 535 | 539 | 588 | 572 | 580 | 565 |
| Mechanical | 760 | 884 | 875 | 987 | 1,030 | 1,015 | 1,025 | 1,052 | 1,017 | 1,022 |
| Other engineering | 676 | 740 | 807 | 734 | 765 | 728 | 764 | 901 | 849 | 846 |
| Sciences, total | 17,189 | 17,974 | 18,809 | 19,237 | 19,745 | 20,383 | 20,527 | 20,924 | 21,082 | 21,353 |
| Physical sciences, total | 3,261 | 3,524 | 3,626 | 3,781 | 3,699 | 3,977 | 3,841 | 3,837 | 3,762 | 3,825 |
| Astronomy | 113 | 128 | 125 | 134 | 145 | 144 | 173 | 192 | 196 | 208 |
| Chemistry | 1,970 | 2,100 | 2,194 | 2,214 | 2,137 | 2,257 | 2,162 | 2,148 | 2,143 | 2,217 |
| Physics | 1,161 | 1,265 | 1,286 | 1,403 | 1,399 | 1,548 | 1,479 | 1,484 | 1,401 | 1,376 |
| Other physical sciences | 17 | 31 | 21 | 30 | 18 | 28 | 27 | 13 | 22 | 24 |
| Earth, atmospheric, and ocean sciences | 723 | 738 | 815 | 794 | 771 | 824 | 780 | 794 | 875 | 814 |
| Mathematics | 859 | 892 | 1,039 | 1,058 | 1,146 | 1,118 | 1,190 | 1,122 | 1,125 | 1,177 |
| Computer sciences | 612 | 705 | 800 | 869 | 880 | 903 | 997 | 921 | 905 | 923 |
| Biological sciences | 4,116 | 4,328 | 4,650 | 4,799 | 5,092 | 5,203 | 5,376 | 5,723 | 5,777 | 5,848 |
| Agricultural sciences | 1,086 | 1,174 | 1,073 | 1,063 | 968 | 1,078 | 1,036 | 1,037 | 978 | 1,035 |
| Psychology | 3,208 | 3,281 | 3,250 | 3,263 | 3,420 | 3,379 | 3,429 | 3,491 | 3,566 | 3,681 |
| Social sciences | 3,324 | 3,332 | 3,556 | 3,610 | 3,769 | 3,901 | 3,878 | 3,999 | 4,094 | 4,050 |
| Non-S&E, total | 12,595 | 13,199 | 13,511 | 14,215 | 14,358 | 14,829 | 15,208 | 15,185 | 15,375 | 15,411 |
| Health | 974 | 956 | 1,041 | 1,112 | 1,197 | 1,296 | 1,330 | 1,324 | 1,422 | 1,500 |
| Humanities ¹ | 3,242 | 3,535 | 3,720 | 4,036 | 4,092 | 4,374 | 4,690 | 4,713 | 5,029 | 5,103 |
| Education | 6,281 | 6,510 | 6,454 | 6,677 | 6,689 | 6,708 | 6,649 | 6,772 | 6,549 | 6,559 |
| Professional/other | 2,098 | 2,198 | 2,296 | 2,390 | 2,380 | 2,451 | 2,539 | 2,376 | 2,375 | 2,249 |
| Grand total, all fields | 34,327 | 36,067 | 37,534 | 38,890 | 39,801 | 41,034 | 41,743 | 42,414 | 42,555 | 42,683 |

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Citizenship known | | | | | | | | | |
| Science and engineering, total | 19,983 | 21,935 | 23,555 | 24,034 | 24,686 | 25,708 | 25,990 | 26,430 | 25,213 | 25,268 |
| Engineering, total | 4,169 | 4,623 | 5,107 | 5,263 | 5,481 | 5,706 | 5,866 | 6,099 | 5,694 | 5,413 |
| Aeronautical/astronautical | 166 | 176 | 205 | 215 | 219 | 226 | 247 | 277 | 260 | 217 |
| Chemical | 680 | 642 | 680 | 717 | 713 | 716 | 699 | 791 | 727 | 725 |
| Civil | 509 | 525 | 566 | 572 | 607 | 677 | 646 | 674 | 616 | 577 |
| Electrical | 1,037 | 1,201 | 1,376 | 1,444 | 1,498 | 1,634 | 1,683 | 1,675 | 1,599 | 1,457 |
| Industrial | 150 | 148 | 162 | 192 | 230 | 228 | 280 | 252 | 228 | 212 |
| Materials/metallurgical | 347 | 424 | 481 | 469 | 516 | 530 | 575 | 556 | 544 | 527 |
| Mechanical | 683 | 833 | 852 | 964 | 988 | 997 | 1,000 | 1,018 | 958 | 939 |
| Other engineering | 597 | 674 | 785 | 690 | 710 | 698 | 736 | 856 | 762 | 759 |
| Sciences, total | 15,814 | 17,312 | 18,448 | 18,771 | 19,205 | 20,002 | 20,124 | 20,331 | 19,519 | 19,855 |
| Physical sciences, total | 3,021 | 3,414 | 3,557 | 3,703 | 3,593 | 3,896 | 3,771 | 3,707 | 3,505 | 3,548 |
| Astronomy | 108 | 126 | 123 | 134 | 145 | 144 | 169 | 191 | 191 | 193 |
| Chemistry | 1,844 | 2,027 | 2,150 | 2,170 | 2,075 | 2,213 | 2,117 | 2,074 | 1,995 | 2,065 |
| Physics | 1,055 | 1,232 | 1,264 | 1,371 | 1,356 | 1,515 | 1,458 | 1,429 | 1,301 | 1,268 |
| Other physical sciences | 14 | 29 | 20 | 28 | 17 | 24 | 27 | 13 | 18 | 22 |
| Earth, atmospheric, and ocean sciences | 669 | 706 | 803 | 777 | 739 | 810 | 767 | 763 | 805 | 759 |
| Mathematics | 774 | 846 | 1,024 | 1,018 | 1,107 | 1,105 | 1,153 | 1,087 | 1,035 | 1,085 |
| Computer sciences | 574 | 674 | 791 | 854 | 857 | 886 | 981 | 889 | 828 | 860 |
| Biological sciences | 3,908 | 4,233 | 4,584 | 4,727 | 4,998 | 5,146 | 5,298 | 5,605 | 5,453 | 5,509 |
| Agricultural sciences | 1,006 | 1,127 | 1,055 | 1,045 | 953 | 1,069 | 1,027 | 1,018 | 901 | 958 |
| Psychology | 2,843 | 3,109 | 3,151 | 3,142 | 3,309 | 3,287 | 3,348 | 3,407 | 3,236 | 3,410 |
| Social sciences | 3,019 | 3,203 | 3,483 | 3,505 | 3,649 | 3,803 | 3,779 | 3,855 | 3,756 | 3,726 |
| Non-S&E, total | 11,692 | 12,761 | 13,186 | 13,909 | 13,954 | 14,592 | 14,879 | 14,686 | 14,127 | 14,288 |
| Health | 890 | 922 | 1,010 | 1,081 | 1,153 | 1,280 | 1,290 | 1,283 | 1,271 | 1,355 |
| Humanities ¹ | 2,999 | 3,436 | 3,638 | 3,935 | 3,978 | 4,295 | 4,603 | 4,567 | 4,661 | 4,744 |
| Education | 5,862 | 6,288 | 6,291 | 6,570 | 6,514 | 6,600 | 6,497 | 6,539 | 6,077 | 6,124 |
| Professional/other | 1,941 | 2,115 | 2,247 | 2,323 | 2,309 | 2,417 | 2,489 | 2,297 | 2,118 | 2,065 |
| Grand total, all fields | 31,675 | 34,696 | 36,741 | 37,943 | 38,640 | 40,300 | 40,869 | 41,116 | 39,340 | 39,556 |

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | U.S. citizens | | | | | | | | | |
| Science and engineering, total | 13,468 | 14,167 | 14,629 | 14,559 | 14,932 | 15,166 | 15,487 | 15,621 | 15,973 | 16,109 |
| Engineering, total | 1,864 | 1,957 | 2,086 | 2,109 | 2,228 | 2,215 | 2,386 | 2,591 | 2,710 | 2,543 |
| Aeronautical/astronautical | 74 | 82 | 103 | 95 | 114 | 110 | 140 | 166 | 153 | 138 |
| Chemical | 382 | 342 | 348 | 318 | 324 | 293 | 291 | 318 | 320 | 326 |
| Civil | 188 | 180 | 173 | 164 | 168 | 203 | 206 | 212 | 248 | 242 |
| Electrical | 440 | 491 | 554 | 597 | 630 | 634 | 683 | 705 | 746 | 631 |
| Industrial | 51 | 56 | 50 | 54 | 89 | 89 | 108 | 107 | 100 | 82 |
| Materials/metallurgical | 173 | 190 | 211 | 202 | 228 | 218 | 238 | 244 | 270 | 265 |
| Mechanical | 259 | 299 | 297 | 352 | 347 | 359 | 383 | 436 | 451 | 431 |
| Other engineering | 297 | 317 | 350 | 327 | 328 | 309 | 337 | 403 | 422 | 428 |
| Sciences, total | 11,604 | 12,210 | 12,543 | 12,450 | 12,704 | 12,951 | 13,101 | 13,030 | 13,263 | 13,566 |
| Physical sciences, total | 1,984 | 2,169 | 2,120 | 2,157 | 2,093 | 2,198 | 2,137 | 2,075 | 2,122 | 2,123 |
| Astronomy | 78 | 92 | 84 | 100 | 106 | 103 | 120 | 137 | 150 | 132 |
| Chemistry | 1,298 | 1,398 | 1,351 | 1,328 | 1,272 | 1,291 | 1,238 | 1,168 | 1,229 | 1,275 |
| Physics | 597 | 660 | 671 | 709 | 704 | 789 | 764 | 761 | 728 | 700 |
| Other physical sciences | 11 | 19 | 14 | 20 | 11 | 15 | 15 | 9 | 15 | 16 |
| Earth, atmospheric, and ocean sciences | 518 | 516 | 592 | 506 | 463 | 507 | 478 | 462 | 524 | 497 |
| Mathematics | 393 | 375 | 463 | 454 | 496 | 504 | 554 | 488 | 520 | 573 |
| Computer sciences | 338 | 348 | 388 | 422 | 425 | 426 | 484 | 421 | 422 | 467 |
| Biological sciences | 3,118 | 3,191 | 3,314 | 3,328 | 3,449 | 3,422 | 3,494 | 3,547 | 3,651 | 3,726 |
| Agricultural sciences | 606 | 630 | 564 | 511 | 457 | 519 | 492 | 473 | 466 | 461 |
| Psychology | 2,683 | 2,919 | 2,953 | 2,900 | 3,071 | 3,052 | 3,083 | 3,122 | 3,019 | 3,167 |
| Social sciences | 1,964 | 2,062 | 2,149 | 2,172 | 2,250 | 2,323 | 2,379 | 2,442 | 2,539 | 2,552 |
| Non-S&E, total | 9,933 | 10,738 | 10,944 | 11,451 | 11,517 | 11,981 | 12,253 | 12,120 | 11,961 | 12,109 |
| Health | 729 | 721 | 779 | 809 | 879 | 961 | 938 | 933 | 949 | 1,035 |
| Humanities ¹ | 2,530 | 2,899 | 2,975 | 3,211 | 3,274 | 3,486 | 3,747 | 3,726 | 3,907 | 3,984 |
| Education | 5,246 | 5,634 | 5,614 | 5,852 | 5,791 | 5,864 | 5,777 | 5,866 | 5,548 | 5,529 |
| Professional/other | 1,428 | 1,484 | 1,576 | 1,579 | 1,573 | 1,670 | 1,791 | 1,595 | 1,557 | 1,561 |
| Grand total, all fields | 23,401 | 24,905 | 25,573 | 26,010 | 26,449 | 27,147 | 27,740 | 27,741 | 27,934 | 28,218 |

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|-------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Non-U.S. citizens | | | | | | | | | |
| Science and engineering, total | 6,515 | 7,768 | 8,926 | 9,475 | 9,754 | 10,542 | 10,503 | 10,809 | 9,240 | 9,159 |
| Engineering, total | 2,305 | 2,666 | 3,021 | 3,154 | 3,253 | 3,491 | 3,480 | 3,508 | 2,984 | 2,870 |
| Aeronautical/astronautical | 92 | 94 | 102 | 120 | 105 | 116 | 107 | 111 | 107 | 79 |
| Chemical | 298 | 300 | 332 | 399 | 389 | 423 | 408 | 473 | 407 | 399 |
| Civil | 321 | 345 | 393 | 408 | 439 | 474 | 440 | 462 | 368 | 335 |
| Electrical | 597 | 710 | 822 | 847 | 868 | 1,000 | 1,000 | 970 | 853 | 826 |
| Industrial | 99 | 92 | 112 | 138 | 141 | 139 | 172 | 145 | 128 | 130 |
| Materials/metallurgical | 174 | 234 | 270 | 267 | 288 | 312 | 337 | 312 | 274 | 262 |
| Mechanical | 424 | 534 | 555 | 612 | 641 | 638 | 617 | 582 | 507 | 508 |
| Other engineering | 300 | 357 | 435 | 363 | 382 | 389 | 399 | 453 | 340 | 331 |
| Sciences, total | 4,210 | 5,102 | 5,905 | 6,321 | 6,501 | 7,051 | 7,023 | 7,301 | 6,256 | 6,289 |
| Physical sciences, total | 1,037 | 1,245 | 1,437 | 1,546 | 1,500 | 1,698 | 1,634 | 1,632 | 1,383 | 1,425 |
| Astronomy | 30 | 34 | 39 | 34 | 39 | 41 | 49 | 54 | 41 | 61 |
| Chemistry | 546 | 629 | 799 | 842 | 803 | 922 | 879 | 906 | 766 | 790 |
| Physics | 458 | 572 | 593 | 662 | 652 | 726 | 694 | 668 | 573 | 568 |
| Other physical sciences | 3 | 10 | 6 | 8 | 6 | 9 | 12 | 4 | 3 | 6 |
| Earth, atmospheric, and ocean sciences | 151 | 190 | 211 | 271 | 276 | 303 | 289 | 301 | 281 | 262 |
| Mathematics | 381 | 471 | 561 | 564 | 611 | 601 | 599 | 599 | 515 | 512 |
| Computer sciences | 236 | 326 | 403 | 432 | 432 | 460 | 497 | 468 | 406 | 393 |
| Biological sciences | 790 | 1,042 | 1,270 | 1,399 | 1,549 | 1,724 | 1,804 | 2,058 | 1,802 | 1,783 |
| Agricultural sciences | 400 | 497 | 491 | 534 | 496 | 550 | 535 | 545 | 435 | 497 |
| Psychology | 160 | 190 | 198 | 242 | 238 | 235 | 265 | 285 | 217 | 243 |
| Social sciences | 1,055 | 1,141 | 1,334 | 1,333 | 1,399 | 1,480 | 1,400 | 1,413 | 1,217 | 1,174 |
| Non-S&E, total | 1,759 | 2,023 | 2,242 | 2,458 | 2,437 | 2,611 | 2,626 | 2,566 | 2,166 | 2,179 |
| Health | 161 | 201 | 231 | 272 | 274 | 319 | 352 | 350 | 322 | 320 |
| Humanities ¹ | 469 | 537 | 663 | 724 | 704 | 809 | 856 | 841 | 754 | 760 |
| Education | 616 | 654 | 677 | 718 | 723 | 736 | 720 | 673 | 529 | 595 |
| Professional/other | 513 | 631 | 671 | 744 | 736 | 747 | 698 | 702 | 561 | 504 |
| Grand total, all fields | 8,274 | 9,791 | 11,168 | 11,933 | 12,191 | 13,153 | 13,129 | 13,375 | 11,406 | 11,338 |

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|----------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Non-U.S. citizens with permanent visas | | | | | | | | | |
| Science and engineering, total | 1,124 | 1,197 | 1,285 | 1,383 | 1,641 | 3,021 | 3,509 | 3,007 | 2,277 | 2,016 |
| Engineering, total | 365 | 389 | 388 | 411 | 469 | 838 | 956 | 792 | 593 | 478 |
| Aeronautical/astronautical | 8 | 8 | 11 | 8 | 6 | 20 | 13 | 18 | 13 | 13 |
| Chemical | 62 | 50 | 51 | 60 | 53 | 87 | 90 | 74 | 88 | 46 |
| Civil | 59 | 61 | 40 | 51 | 59 | 89 | 103 | 93 | 78 | 51 |
| Electrical | 99 | 108 | 132 | 122 | 165 | 265 | 288 | 221 | 187 | 166 |
| Industrial | 8 | 13 | 18 | 20 | 16 | 30 | 41 | 29 | 17 | 17 |
| Materials/metallurgical | 21 | 26 | 29 | 34 | 39 | 79 | 114 | 92 | 44 | 48 |
| Mechanical | 66 | 69 | 62 | 74 | 87 | 179 | 180 | 152 | 82 | 81 |
| Other engineering | 42 | 54 | 45 | 42 | 44 | 89 | 127 | 113 | 84 | 56 |
| Sciences, total | 759 | 808 | 897 | 972 | 1,172 | 2,183 | 2,553 | 2,215 | 1,684 | 1,538 |
| Physical sciences, total | 147 | 172 | 180 | 200 | 237 | 591 | 704 | 493 | 366 | 312 |
| Astronomy | 4 | 4 | 2 | 6 | 5 | 9 | 21 | 12 | 7 | 16 |
| Chemistry | 85 | 99 | 110 | 113 | 128 | 325 | 386 | 293 | 205 | 180 |
| Physics | 57 | 65 | 68 | 81 | 102 | 255 | 295 | 187 | 152 | 114 |
| Other physical sciences | 1 | 4 | 0 | 0 | 2 | 2 | 2 | 1 | 2 | 2 |
| Earth, atmospheric, and ocean sciences | 29 | 19 | 26 | 35 | 41 | 106 | 116 | 96 | 70 | 62 |
| Mathematics | 35 | 47 | 55 | 53 | 94 | 153 | 217 | 158 | 99 | 93 |
| Computer sciences | 58 | 55 | 63 | 67 | 84 | 117 | 132 | 92 | 91 | 84 |
| Biological sciences | 182 | 189 | 211 | 240 | 303 | 666 | 835 | 818 | 583 | 553 |
| Agricultural sciences | 45 | 57 | 56 | 62 | 49 | 97 | 106 | 103 | 83 | 79 |
| Psychology | 54 | 73 | 65 | 86 | 90 | 84 | 101 | 104 | 89 | 92 |
| Social sciences | 209 | 196 | 241 | 229 | 274 | 369 | 342 | 351 | 303 | 263 |
| Non-S&E, total | 502 | 501 | 572 | 597 | 618 | 726 | 810 | 758 | 651 | 680 |
| Health | 27 | 35 | 60 | 46 | 60 | 89 | 107 | 83 | 69 | 81 |
| Humanities ¹ | 186 | 183 | 219 | 229 | 238 | 280 | 308 | 319 | 289 | 304 |
| Education | 164 | 153 | 174 | 165 | 177 | 199 | 218 | 196 | 164 | 171 |
| Professional/other | 125 | 130 | 119 | 157 | 143 | 158 | 177 | 160 | 129 | 124 |
| Grand total, all fields | 1,626 | 1,698 | 1,857 | 1,980 | 2,259 | 3,747 | 4,319 | 3,765 | 2,928 | 2,696 |

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|----------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Non-U.S. citizens with temporary visas | | | | | | | | | |
| Science and engineering, total | 5,391 | 6,571 | 7,641 | 8,092 | 8,113 | 7,521 | 6,994 | 7,802 | 6,963 | 7,143 |
| Engineering, total | 1,940 | 2,277 | 2,633 | 2,743 | 2,784 | 2,653 | 2,524 | 2,716 | 2,391 | 2,392 |
| Aeronautical/astronautical | 84 | 86 | 91 | 112 | 99 | 96 | 94 | 93 | 94 | 66 |
| Chemical | 236 | 250 | 281 | 339 | 336 | 336 | 318 | 399 | 319 | 353 |
| Civil | 262 | 284 | 353 | 357 | 380 | 385 | 337 | 369 | 290 | 284 |
| Electrical | 498 | 602 | 690 | 725 | 703 | 735 | 712 | 749 | 666 | 660 |
| Industrial | 91 | 79 | 94 | 118 | 125 | 109 | 131 | 116 | 111 | 113 |
| Materials/metallurgical | 153 | 208 | 241 | 233 | 249 | 233 | 223 | 220 | 230 | 214 |
| Mechanical | 358 | 465 | 493 | 538 | 554 | 459 | 437 | 430 | 425 | 427 |
| Other engineering | 258 | 303 | 390 | 321 | 338 | 300 | 272 | 340 | 256 | 275 |
| Sciences, total | 3,451 | 4,294 | 5,008 | 5,349 | 5,329 | 4,868 | 4,470 | 5,086 | 4,572 | 4,751 |
| Physical sciences, total | 890 | 1,073 | 1,257 | 1,346 | 1,263 | 1,107 | 930 | 1,139 | 1,017 | 1,113 |
| Astronomy | 26 | 30 | 37 | 28 | 34 | 32 | 28 | 42 | 34 | 45 |
| Chemistry | 461 | 530 | 689 | 729 | 675 | 597 | 493 | 613 | 561 | 610 |
| Physics | 401 | 507 | 525 | 581 | 550 | 471 | 399 | 481 | 421 | 454 |
| Other physical sciences | 2 | 6 | 6 | 8 | 4 | 7 | 10 | 3 | 1 | 4 |
| Earth, atmospheric, and ocean sciences | 122 | 171 | 185 | 236 | 235 | 197 | 173 | 205 | 211 | 200 |
| Mathematics | 346 | 424 | 506 | 511 | 517 | 448 | 382 | 441 | 416 | 419 |
| Computer sciences | 178 | 271 | 340 | 365 | 348 | 343 | 365 | 376 | 315 | 309 |
| Biological sciences | 608 | 853 | 1,059 | 1,159 | 1,246 | 1,058 | 969 | 1,240 | 1,219 | 1,230 |
| Agricultural sciences | 355 | 440 | 435 | 472 | 447 | 453 | 429 | 442 | 352 | 418 |
| Psychology | 106 | 117 | 133 | 156 | 148 | 151 | 164 | 181 | 128 | 151 |
| Social sciences | 846 | 945 | 1,093 | 1,104 | 1,125 | 1,111 | 1,058 | 1,062 | 914 | 911 |
| Non-S&E, total | 1,257 | 1,522 | 1,670 | 1,861 | 1,819 | 1,885 | 1,816 | 1,808 | 1,515 | 1,499 |
| Health | 134 | 166 | 171 | 226 | 214 | 230 | 245 | 267 | 253 | 239 |
| Humanities ¹ | 283 | 354 | 444 | 495 | 466 | 529 | 548 | 522 | 465 | 456 |
| Education | 452 | 501 | 503 | 553 | 546 | 537 | 502 | 477 | 365 | 424 |
| Professional/other | 388 | 501 | 552 | 587 | 593 | 589 | 521 | 542 | 432 | 380 |
| Grand total, all fields | 6,648 | 8,093 | 9,311 | 9,953 | 9,932 | 9,406 | 8,810 | 9,610 | 8,478 | 8,642 |

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|---------------------|-------|------|------|-------|------|------|-------|-------|-------|
| | Citizenship unknown | | | | | | | | | |
| Science and engineering, total | 1,749 | 933 | 468 | 641 | 757 | 497 | 545 | 799 | 1,967 | 2,004 |
| Engineering, total | 374 | 271 | 107 | 175 | 217 | 116 | 142 | 206 | 404 | 506 |
| Aeronautical/astronautical | 12 | 16 | 2 | 19 | 9 | 4 | 5 | 10 | 10 | 25 |
| Chemical | 32 | 16 | 11 | 8 | 24 | 9 | 9 | 7 | 40 | 49 |
| Civil | 29 | 28 | 9 | 22 | 17 | 7 | 10 | 23 | 39 | 73 |
| Electrical | 100 | 75 | 29 | 39 | 45 | 39 | 48 | 65 | 119 | 136 |
| Industrial | 12 | 3 | 3 | 4 | 6 | 0 | 4 | 6 | 14 | 15 |
| Materials/metallurgical | 33 | 16 | 8 | 16 | 19 | 9 | 13 | 16 | 36 | 38 |
| Mechanical | 77 | 51 | 23 | 23 | 42 | 18 | 25 | 34 | 59 | 83 |
| Other engineering | 79 | 66 | 22 | 44 | 55 | 30 | 28 | 45 | 87 | 87 |
| Sciences, total | 1,375 | 662 | 361 | 466 | 540 | 381 | 403 | 593 | 1,563 | 1,498 |
| Physical sciences, total | 240 | 110 | 69 | 78 | 106 | 81 | 70 | 130 | 257 | 277 |
| Astronomy | 5 | 2 | 2 | 0 | 0 | 0 | 4 | 1 | 5 | 15 |
| Chemistry | 126 | 73 | 44 | 44 | 62 | 44 | 45 | 74 | 148 | 152 |
| Physics | 106 | 33 | 22 | 32 | 43 | 33 | 21 | 55 | 100 | 108 |
| Other physical sciences | 3 | 2 | 1 | 2 | 1 | 4 | 0 | 0 | 4 | 2 |
| Earth, atmospheric, and ocean sciences | 54 | 32 | 12 | 17 | 32 | 14 | 13 | 31 | 70 | 55 |
| Mathematics | 85 | 46 | 15 | 40 | 39 | 13 | 37 | 35 | 90 | 92 |
| Computer sciences | 38 | 31 | 9 | 15 | 23 | 17 | 16 | 32 | 77 | 63 |
| Biological sciences | 208 | 95 | 66 | 72 | 94 | 57 | 78 | 118 | 324 | 339 |
| Agricultural sciences | 80 | 47 | 18 | 18 | 15 | 9 | 9 | 19 | 77 | 77 |
| Psychology | 365 | 172 | 99 | 121 | 111 | 92 | 81 | 84 | 330 | 271 |
| Social sciences | 305 | 129 | 73 | 105 | 120 | 98 | 99 | 144 | 338 | 324 |
| Non-S&E, total | 903 | 438 | 325 | 306 | 404 | 237 | 329 | 499 | 1,248 | 1,123 |
| Health | 84 | 34 | 31 | 31 | 44 | 16 | 40 | 41 | 151 | 145 |
| Humanities ¹ | 243 | 99 | 82 | 101 | 114 | 79 | 87 | 146 | 368 | 359 |
| Education | 419 | 222 | 163 | 107 | 175 | 108 | 152 | 233 | 472 | 435 |
| Professional/other | 157 | 83 | 49 | 67 | 71 | 34 | 50 | 79 | 257 | 184 |
| Grand total, all fields | 2,652 | 1,371 | 793 | 947 | 1,161 | 734 | 874 | 1,298 | 3,215 | 3,127 |

¹ Categories differ from those published by other Federal sponsors and the National Research Council in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total | | | | | | | | | | |
| Science and engineering, total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Engineering, total | 20.9 | 21.4 | 21.7 | 22.0 | 22.4 | 22.2 | 22.6 | 23.2 | 22.4 | 21.7 |
| Aeronautical/astronautical | .8 | .8 | .9 | .9 | .9 | .9 | .9 | 1.1 | 1.0 | .9 |
| Chemical | 3.3 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.7 | 2.9 | 2.8 | 2.8 |
| Civil | 2.5 | 2.4 | 2.4 | 2.4 | 2.5 | 2.6 | 2.5 | 2.6 | 2.4 | 2.4 |
| Electrical | 5.2 | 5.6 | 5.8 | 6.0 | 6.1 | 6.4 | 6.5 | 6.4 | 6.3 | 5.8 |
| Industrial | .7 | .7 | .7 | .8 | .9 | .9 | 1.1 | .9 | .9 | .8 |
| Materials/metallurgical | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 |
| Mechanical | 3.5 | 3.9 | 3.6 | 4.0 | 4.0 | 3.9 | 3.9 | 3.9 | 3.7 | 3.7 |
| Other engineering | 3.1 | 3.2 | 3.4 | 3.0 | 3.0 | 2.8 | 2.9 | 3.3 | 3.1 | 3.1 |
| Sciences, total | 79.1 | 78.6 | 78.3 | 78.0 | 77.6 | 77.8 | 77.4 | 76.8 | 77.6 | 78.3 |
| Physical sciences, total | 15.0 | 15.4 | 15.1 | 15.3 | 14.5 | 15.2 | 14.5 | 14.1 | 13.8 | 14.0 |
| Astronomy | .5 | .6 | .5 | .5 | .6 | .5 | .7 | .7 | .7 | .8 |
| Chemistry | 9.1 | 9.2 | 9.1 | 9.0 | 8.4 | 8.6 | 8.1 | 7.9 | 7.9 | 8.1 |
| Physics | 5.3 | 5.5 | 5.4 | 5.7 | 5.5 | 5.9 | 5.6 | 5.5 | 5.2 | 5.0 |
| Other physical sciences | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .0 | .1 | .1 |
| Earth, atmospheric, and ocean sciences | 3.3 | 3.2 | 3.4 | 3.2 | 3.0 | 3.1 | 2.9 | 2.9 | 3.2 | 3.0 |
| Mathematics | 4.0 | 3.9 | 4.3 | 4.3 | 4.5 | 4.3 | 4.5 | 4.1 | 4.1 | 4.3 |
| Computer sciences | 2.8 | 3.1 | 3.3 | 3.5 | 3.5 | 3.4 | 3.8 | 3.4 | 3.3 | 3.4 |
| Biological sciences | 18.9 | 18.9 | 19.4 | 19.4 | 20.0 | 19.9 | 20.3 | 21.0 | 21.3 | 21.4 |
| Agricultural sciences | 5.0 | 5.1 | 4.5 | 4.3 | 3.8 | 4.1 | 3.9 | 3.8 | 3.6 | 3.8 |
| Psychology | 14.8 | 14.3 | 13.5 | 13.2 | 13.4 | 12.9 | 12.9 | 12.8 | 13.1 | 13.5 |
| Social sciences | 15.3 | 14.6 | 14.8 | 14.6 | 14.8 | 14.9 | 14.6 | 14.7 | 15.1 | 14.9 |
| Citizenship known | | | | | | | | | | |
| Science and engineering, total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Engineering, total | 20.9 | 21.1 | 21.7 | 21.9 | 22.2 | 22.2 | 22.6 | 23.1 | 22.6 | 21.4 |
| Aeronautical/astronautical | .8 | .8 | .9 | .9 | .9 | .9 | 1.0 | 1.0 | 1.0 | .9 |
| Chemical | 3.4 | 2.9 | 2.9 | 3.0 | 2.9 | 2.8 | 2.7 | 3.0 | 2.9 | 2.9 |
| Civil | 2.5 | 2.4 | 2.4 | 2.4 | 2.5 | 2.6 | 2.5 | 2.6 | 2.4 | 2.3 |
| Electrical | 5.2 | 5.5 | 5.8 | 6.0 | 6.1 | 6.4 | 6.5 | 6.3 | 6.3 | 5.8 |
| Industrial | .8 | .7 | .7 | .8 | .9 | .9 | 1.1 | 1.0 | .9 | .8 |
| Materials/metallurgical | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.2 | 2.1 | 2.2 | 2.1 |
| Mechanical | 3.4 | 3.8 | 3.6 | 4.0 | 4.0 | 3.9 | 3.8 | 3.9 | 3.8 | 3.7 |
| Other engineering | 3.0 | 3.1 | 3.3 | 2.9 | 2.9 | 2.7 | 2.8 | 3.2 | 3.0 | 3.0 |
| Sciences, total | 79.1 | 78.9 | 78.3 | 78.1 | 77.8 | 77.8 | 77.4 | 76.9 | 77.4 | 78.6 |
| Physical sciences, total | 15.1 | 15.6 | 15.1 | 15.4 | 14.6 | 15.2 | 14.5 | 14.0 | 13.9 | 14.0 |
| Astronomy | .5 | .6 | .5 | .6 | .6 | .6 | .7 | .7 | .8 | .8 |
| Chemistry | 9.2 | 9.2 | 9.1 | 9.0 | 8.4 | 8.6 | 8.1 | 7.8 | 7.9 | 8.2 |
| Physics | 5.3 | 5.6 | 5.4 | 5.7 | 5.5 | 5.9 | 5.6 | 5.4 | 5.2 | 5.0 |
| Other physical sciences | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .0 | .1 | .1 |
| Earth, atmospheric, and ocean sciences | 3.3 | 3.2 | 3.4 | 3.2 | 3.0 | 3.2 | 3.0 | 2.9 | 3.2 | 3.0 |
| Mathematics | 3.9 | 3.9 | 4.3 | 4.2 | 4.5 | 4.3 | 4.4 | 4.1 | 4.1 | 4.3 |
| Computer sciences | 2.9 | 3.1 | 3.4 | 3.6 | 3.5 | 3.4 | 3.8 | 3.4 | 3.3 | 3.4 |
| Biological sciences | 19.6 | 19.3 | 19.5 | 19.7 | 20.2 | 20.0 | 20.4 | 21.2 | 21.6 | 21.8 |
| Agricultural sciences | 5.0 | 5.1 | 4.5 | 4.3 | 3.9 | 4.2 | 4.0 | 3.9 | 3.6 | 3.8 |
| Psychology | 14.2 | 14.2 | 13.4 | 13.1 | 13.4 | 12.8 | 12.9 | 12.9 | 12.8 | 13.5 |
| Social sciences | 15.1 | 14.6 | 14.8 | 14.6 | 14.8 | 14.8 | 14.5 | 14.6 | 14.9 | 14.7 |

See explanatory information, if any, and SOURCE at end of table.

Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| U.S. citizens | | | | | | | | | | |
| Science and engineering, total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Engineering, total | 13.8 | 13.8 | 14.3 | 14.5 | 14.9 | 14.6 | 15.4 | 16.6 | 17.0 | 15.8 |
| Aeronautical/astronautical | .5 | .6 | .7 | .7 | .8 | .7 | .9 | 1.1 | 1.0 | .9 |
| Chemical | 2.8 | 2.4 | 2.4 | 2.2 | 2.2 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 |
| Civil | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 | 1.3 | 1.3 | 1.4 | 1.6 | 1.5 |
| Electrical | 3.3 | 3.5 | 3.8 | 4.1 | 4.2 | 4.2 | 4.4 | 4.5 | 4.7 | 3.9 |
| Industrial | .4 | .4 | .3 | .4 | .6 | .6 | .7 | .7 | .6 | .5 |
| Materials/metallurgical | 1.3 | 1.3 | 1.4 | 1.4 | 1.5 | 1.4 | 1.5 | 1.6 | 1.7 | 1.6 |
| Mechanical | 1.9 | 2.1 | 2.0 | 2.4 | 2.3 | 2.4 | 2.5 | 2.8 | 2.8 | 2.7 |
| Other engineering | 2.2 | 2.2 | 2.4 | 2.2 | 2.2 | 2.0 | 2.2 | 2.6 | 2.6 | 2.7 |
| Sciences, total | 86.2 | 86.2 | 85.7 | 85.5 | 85.1 | 85.4 | 84.6 | 83.4 | 83.0 | 84.2 |
| Physical sciences, total | 14.7 | 15.3 | 14.5 | 14.8 | 14.0 | 14.5 | 13.8 | 13.3 | 13.3 | 13.2 |
| Astronomy | .6 | .6 | .6 | .7 | .7 | .7 | .8 | .9 | .9 | .8 |
| Chemistry | 9.6 | 9.9 | 9.2 | 9.1 | 8.5 | 8.5 | 8.0 | 7.5 | 7.7 | 7.9 |
| Physics | 4.4 | 4.7 | 4.6 | 4.9 | 4.7 | 5.2 | 4.9 | 4.9 | 4.6 | 4.3 |
| Other physical sciences | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 |
| Earth, atmospheric, and ocean sciences | 3.8 | 3.6 | 4.0 | 3.5 | 3.1 | 3.3 | 3.1 | 3.0 | 3.3 | 3.1 |
| Mathematics | 2.9 | 2.6 | 3.2 | 3.1 | 3.3 | 3.3 | 3.6 | 3.1 | 3.3 | 3.6 |
| Computer sciences | 2.5 | 2.5 | 2.7 | 2.9 | 2.8 | 2.8 | 3.1 | 2.7 | 2.6 | 2.9 |
| Biological sciences | 23.2 | 22.5 | 22.7 | 22.9 | 23.1 | 22.6 | 22.6 | 22.7 | 22.9 | 23.1 |
| Agricultural sciences | 4.5 | 4.4 | 3.9 | 3.5 | 3.1 | 3.4 | 3.2 | 3.0 | 2.9 | 2.9 |
| Psychology | 19.9 | 20.6 | 20.2 | 19.9 | 20.6 | 20.1 | 19.9 | 20.0 | 18.9 | 19.7 |
| Social sciences | 14.6 | 14.6 | 14.7 | 14.9 | 15.1 | 15.3 | 15.4 | 15.6 | 15.9 | 15.8 |
| Non-U.S. citizens | | | | | | | | | | |
| Science and engineering, total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Engineering, total | 35.4 | 34.3 | 33.8 | 33.3 | 33.4 | 33.1 | 33.1 | 32.5 | 32.3 | 31.3 |
| Aeronautical/astronautical | 1.4 | 1.2 | 1.1 | 1.3 | 1.1 | 1.1 | 1.0 | 1.0 | 1.2 | .9 |
| Chemical | 4.6 | 3.9 | 3.7 | 4.2 | 4.0 | 4.0 | 3.9 | 4.4 | 4.4 | 4.4 |
| Civil | 4.9 | 4.4 | 4.4 | 4.3 | 4.5 | 4.5 | 4.2 | 4.3 | 4.0 | 3.7 |
| Electrical | 9.2 | 9.1 | 9.2 | 8.9 | 8.9 | 9.5 | 9.5 | 9.0 | 9.2 | 9.0 |
| Industrial | 1.5 | 1.2 | 1.3 | 1.5 | 1.4 | 1.3 | 1.6 | 1.3 | 1.4 | 1.4 |
| Materials/metallurgical | 2.7 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 | 3.2 | 2.9 | 3.0 | 2.9 |
| Mechanical | 6.5 | 6.9 | 6.2 | 6.5 | 6.6 | 6.1 | 5.9 | 5.4 | 5.5 | 5.5 |
| Other engineering | 4.6 | 4.6 | 4.9 | 3.8 | 3.9 | 3.7 | 3.8 | 4.2 | 3.7 | 3.6 |
| Sciences, total | 64.6 | 65.7 | 66.2 | 66.7 | 66.6 | 66.9 | 66.9 | 67.5 | 67.7 | 68.7 |
| Physical sciences, total | 15.9 | 16.0 | 16.1 | 16.3 | 15.4 | 16.1 | 15.6 | 15.1 | 15.0 | 15.6 |
| Astronomy | .5 | .4 | .4 | .4 | .4 | .4 | .5 | .5 | .4 | .7 |
| Chemistry | 8.4 | 8.1 | 9.0 | 8.9 | 8.2 | 8.7 | 8.4 | 8.4 | 8.3 | 8.6 |
| Physics | 7.0 | 7.4 | 6.6 | 7.0 | 6.7 | 6.9 | 6.6 | 6.2 | 6.2 | 6.2 |
| Other physical sciences | .0 | .1 | .1 | .1 | .1 | .1 | .1 | .0 | .0 | .1 |
| Earth, atmospheric, and ocean sciences | 2.3 | 2.4 | 2.4 | 2.9 | 2.8 | 2.9 | 2.8 | 2.8 | 3.0 | 2.9 |
| Mathematics | 5.8 | 6.1 | 6.3 | 6.0 | 6.3 | 5.7 | 5.7 | 5.5 | 5.6 | 5.6 |
| Computer sciences | 3.6 | 4.2 | 4.5 | 4.6 | 4.4 | 4.4 | 4.7 | 4.3 | 4.4 | 4.3 |
| Biological sciences | 12.1 | 13.4 | 14.2 | 14.8 | 15.9 | 16.4 | 17.2 | 19.0 | 19.5 | 19.5 |
| Agricultural sciences | 6.1 | 6.4 | 5.5 | 5.6 | 5.1 | 5.2 | 5.1 | 5.0 | 4.7 | 5.4 |
| Psychology | 2.5 | 2.4 | 2.2 | 2.6 | 2.4 | 2.2 | 2.5 | 2.6 | 2.3 | 2.7 |
| Social sciences | 16.2 | 14.7 | 14.9 | 14.1 | 14.3 | 14.0 | 13.3 | 13.1 | 13.2 | 12.8 |

See explanatory information, if any, and SOURCE at end of table.

Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Non-U.S. citizens with permanent visas | | | | | | | | | | |
| Science and engineering, total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Engineering, total | 32.5 | 32.5 | 30.2 | 29.7 | 28.6 | 27.7 | 27.2 | 26.3 | 26.0 | 23.7 |
| Aeronautical/astronautical | .7 | .7 | .9 | .6 | .4 | .7 | .4 | .6 | .6 | .6 |
| Chemical | 5.5 | 4.2 | 4.0 | 4.3 | 3.2 | 2.9 | 2.6 | 2.5 | 3.9 | 2.3 |
| Civil | 5.2 | 5.1 | 3.1 | 3.7 | 3.6 | 2.9 | 2.9 | 3.1 | 3.4 | 2.5 |
| Electrical | 8.8 | 9.0 | 10.3 | 8.8 | 10.1 | 8.8 | 8.2 | 7.3 | 8.2 | 8.2 |
| Industrial | .7 | 1.1 | 1.4 | 1.4 | 1.0 | 1.0 | 1.2 | 1.0 | .7 | .8 |
| Materials/metallurgical | 1.9 | 2.2 | 2.3 | 2.5 | 2.4 | 2.6 | 3.2 | 3.1 | 1.9 | 2.4 |
| Mechanical | 5.9 | 5.8 | 4.8 | 5.4 | 5.3 | 5.9 | 5.1 | 5.1 | 3.6 | 4.0 |
| Other engineering | 3.7 | 4.5 | 3.5 | 3.0 | 2.7 | 2.9 | 3.6 | 3.8 | 3.7 | 2.8 |
| Sciences, total | 67.5 | 67.5 | 69.8 | 70.3 | 71.4 | 72.3 | 72.8 | 73.7 | 74.0 | 76.3 |
| Physical sciences, total | 13.1 | 14.4 | 14.0 | 14.5 | 14.4 | 19.6 | 20.1 | 16.4 | 16.1 | 15.5 |
| Astronomy | .4 | .3 | .2 | .4 | .3 | .3 | .6 | .4 | .3 | .8 |
| Chemistry | 7.6 | 8.3 | 8.6 | 8.2 | 7.8 | 10.8 | 11.0 | 9.7 | 9.0 | 8.9 |
| Physics | 5.1 | 5.4 | 5.3 | 5.9 | 6.2 | 8.4 | 8.4 | 6.2 | 6.7 | 5.7 |
| Other physical sciences | .1 | .3 | .0 | .0 | .1 | .1 | .1 | .0 | .1 | .1 |
| Earth, atmospheric, and ocean sciences | 2.6 | 1.6 | 2.0 | 2.5 | 2.5 | 3.5 | 3.3 | 3.2 | 3.1 | 3.1 |
| Mathematics | 3.1 | 3.9 | 4.3 | 3.8 | 5.7 | 5.1 | 6.2 | 5.3 | 4.3 | 4.6 |
| Computer sciences | 5.2 | 4.6 | 4.9 | 4.8 | 5.1 | 3.9 | 3.8 | 3.1 | 4.0 | 4.2 |
| Biological sciences | 16.2 | 15.8 | 16.4 | 17.4 | 18.5 | 22.0 | 23.8 | 27.2 | 25.6 | 27.4 |
| Agricultural sciences | 4.0 | 4.8 | 4.4 | 4.5 | 3.0 | 3.2 | 3.0 | 3.4 | 3.6 | 3.9 |
| Psychology | 4.8 | 6.1 | 5.1 | 6.2 | 5.5 | 2.8 | 2.9 | 3.5 | 3.9 | 4.6 |
| Social sciences | 18.6 | 16.4 | 18.8 | 16.6 | 16.7 | 12.2 | 9.7 | 11.7 | 13.3 | 13.0 |
| Non-U.S. citizens with temporary visas | | | | | | | | | | |
| Science and engineering, total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Engineering, total | 36.0 | 34.7 | 34.5 | 33.9 | 34.3 | 35.3 | 36.1 | 34.8 | 34.3 | 33.5 |
| Aeronautical/astronautical | 1.6 | 1.3 | 1.2 | 1.4 | 1.2 | 1.3 | 1.3 | 1.2 | 1.3 | .9 |
| Chemical | 4.4 | 3.8 | 3.7 | 4.2 | 4.1 | 4.5 | 4.5 | 5.1 | 4.6 | 4.9 |
| Civil | 4.9 | 4.3 | 4.6 | 4.4 | 4.7 | 5.1 | 4.8 | 4.7 | 4.2 | 4.0 |
| Electrical | 9.2 | 9.2 | 9.0 | 9.0 | 8.7 | 9.8 | 10.2 | 9.6 | 9.6 | 9.2 |
| Industrial | 1.7 | 1.2 | 1.2 | 1.5 | 1.5 | 1.4 | 1.9 | 1.5 | 1.6 | 1.6 |
| Materials/metallurgical | 2.8 | 3.2 | 3.2 | 2.9 | 3.1 | 3.1 | 3.2 | 2.8 | 3.3 | 3.0 |
| Mechanical | 6.6 | 7.1 | 6.5 | 6.6 | 6.8 | 6.1 | 6.2 | 5.5 | 6.1 | 6.0 |
| Other engineering | 4.8 | 4.6 | 5.1 | 4.0 | 4.2 | 4.0 | 3.9 | 4.4 | 3.7 | 3.8 |
| Sciences, total | 64.0 | 65.3 | 65.5 | 66.1 | 65.7 | 64.7 | 63.9 | 65.2 | 65.7 | 66.5 |
| Physical sciences, total | 16.5 | 16.3 | 16.5 | 16.6 | 15.6 | 14.7 | 13.3 | 14.6 | 14.6 | 15.6 |
| Astronomy | .5 | .5 | .5 | .3 | .4 | .4 | .4 | .5 | .5 | .6 |
| Chemistry | 8.6 | 8.1 | 9.0 | 9.0 | 8.3 | 7.9 | 7.0 | 7.9 | 8.1 | 8.5 |
| Physics | 7.4 | 7.7 | 6.9 | 7.2 | 6.8 | 6.3 | 5.7 | 6.2 | 6.0 | 6.4 |
| Other physical sciences | .0 | .1 | .1 | .1 | .0 | .1 | .1 | .0 | .0 | .1 |
| Earth, atmospheric, and ocean sciences | 2.3 | 2.6 | 2.4 | 2.9 | 2.9 | 2.6 | 2.5 | 2.6 | 3.0 | 2.8 |
| Mathematics | 6.4 | 6.5 | 6.6 | 6.3 | 6.4 | 6.0 | 5.5 | 5.7 | 6.0 | 5.9 |
| Computer sciences | 3.3 | 4.1 | 4.4 | 4.5 | 4.3 | 4.6 | 5.2 | 4.8 | 4.5 | 4.3 |
| Biological sciences | 11.3 | 13.0 | 13.9 | 14.3 | 15.4 | 14.1 | 13.9 | 15.9 | 17.5 | 17.2 |
| Agricultural sciences | 6.6 | 6.7 | 5.7 | 5.8 | 5.5 | 6.0 | 6.1 | 5.7 | 5.1 | 5.9 |
| Psychology | 2.0 | 1.8 | 1.7 | 1.9 | 1.8 | 2.0 | 2.3 | 2.3 | 1.8 | 2.1 |
| Social sciences | 15.7 | 14.4 | 14.3 | 13.6 | 13.9 | 14.8 | 15.1 | 13.6 | 13.1 | 12.8 |

See explanatory information, if any, and SOURCE at end of table.

Table 4a. Percentage distribution of science and engineering doctorates awarded, by major field and citizenship status of recipients: 1989-98

| Field of study | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|----------------------------------------------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Citizenship unknown | | | | | | | | | |
| Science and engineering, total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Engineering, total | 21.4 | 29.0 | 22.9 | 27.3 | 28.7 | 23.3 | 26.1 | 25.8 | 20.5 | 25.2 |
| Aeronautical/astronautical | .7 | 1.7 | .4 | 3.0 | 1.2 | .8 | .9 | 1.3 | .5 | 1.2 |
| Chemical | 1.8 | 1.7 | 2.4 | 1.2 | 3.2 | 1.8 | 1.7 | .9 | 2.0 | 2.4 |
| Civil | 1.7 | 3.0 | 1.9 | 3.4 | 2.2 | 1.4 | 1.8 | 2.9 | 2.0 | 3.6 |
| Electrical | 5.7 | 8.0 | 6.2 | 6.1 | 5.9 | 7.8 | 8.8 | 8.1 | 6.0 | 6.8 |
| Industrial | .7 | .3 | .6 | .6 | .8 | .0 | .7 | .8 | .7 | .7 |
| Materials/metallurgical | 1.9 | 1.7 | 1.7 | 2.5 | 2.5 | 1.8 | 2.4 | 2.0 | 1.8 | 1.9 |
| Mechanical | 4.4 | 5.5 | 4.9 | 3.6 | 5.5 | 3.6 | 4.6 | 4.3 | 3.0 | 4.1 |
| Other engineering | 4.5 | 7.1 | 4.7 | 6.9 | 7.3 | 6.0 | 5.1 | 5.6 | 4.4 | 4.3 |
| Sciences, total | 78.6 | 71.0 | 77.1 | 72.7 | 71.3 | 76.7 | 73.9 | 74.2 | 79.5 | 74.8 |
| Physical sciences, total | 13.7 | 11.8 | 14.7 | 12.2 | 14.0 | 16.3 | 12.8 | 16.3 | 13.1 | 13.8 |
| Astronomy | .3 | .2 | .4 | .0 | .0 | .0 | .7 | .1 | .3 | .7 |
| Chemistry | 7.2 | 7.8 | 9.4 | 6.9 | 8.2 | 8.9 | 8.3 | 9.3 | 7.5 | 7.6 |
| Physics | 6.1 | 3.5 | 4.7 | 5.0 | 5.7 | 6.6 | 3.9 | 6.9 | 5.1 | 5.4 |
| Other physical sciences | .2 | .2 | .2 | .3 | .1 | .8 | .0 | .0 | .2 | .1 |
| Earth, atmospheric, and ocean sciences | 3.1 | 3.4 | 2.6 | 2.7 | 4.2 | 2.8 | 2.4 | 3.9 | 3.6 | 2.7 |
| Mathematics | 4.9 | 4.9 | 3.2 | 6.2 | 5.2 | 2.6 | 6.8 | 4.4 | 4.6 | 4.6 |
| Computer sciences | 2.2 | 3.3 | 1.9 | 2.3 | 3.0 | 3.4 | 2.9 | 4.0 | 3.9 | 3.1 |
| Biological sciences | 11.9 | 10.2 | 14.1 | 11.2 | 12.4 | 11.5 | 14.3 | 14.8 | 16.5 | 16.9 |
| Agricultural sciences | 4.6 | 5.0 | 3.8 | 2.8 | 2.0 | 1.8 | 1.7 | 2.4 | 3.9 | 3.8 |
| Psychology | 20.9 | 18.4 | 21.2 | 18.9 | 14.7 | 18.5 | 14.9 | 10.5 | 16.8 | 13.5 |
| Social sciences | 17.4 | 13.8 | 15.6 | 16.4 | 15.9 | 19.7 | 18.2 | 18.0 | 17.2 | 16.2 |

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

**Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates,
by country of citizenship, visa type, and year of doctorate: 1989-98**

| Country of citizenship | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|
| Total non-U.S. citizens, S&E | | | | | | | | | | |
| Total foreign citizenship | 6,515 | 7,768 | 8,926 | 9,475 | 9,754 | 10,542 | 10,503 | 10,809 | 9,240 | 9,159 |
| North America, total | 403 | 446 | 525 | 515 | 506 | 547 | 505 | 530 | 455 | 527 |
| Canada | 220 | 253 | 297 | 304 | 285 | 275 | 274 | 276 | 243 | 268 |
| Caribbean | 29 | 36 | 54 | 44 | 38 | 61 | 60 | 51 | 45 | 60 |
| Central America | 34 | 53 | 46 | 52 | 44 | 69 | 43 | 45 | 34 | 38 |
| Mexico | 120 | 104 | 128 | 115 | 139 | 142 | 128 | 158 | 133 | 161 |
| South America, total | 297 | 343 | 387 | 394 | 394 | 408 | 359 | 455 | 372 | 405 |
| Argentina | 43 | 65 | 62 | 86 | 53 | 56 | 49 | 66 | 67 | 71 |
| Brazil | 100 | 100 | 119 | 133 | 151 | 157 | 137 | 205 | 136 | 150 |
| Chile | 47 | 50 | 54 | 48 | 52 | 42 | 38 | 36 | 27 | 23 |
| Colombia | 27 | 40 | 49 | 37 | 35 | 48 | 45 | 42 | 38 | 25 |
| South America, other | 80 | 88 | 103 | 90 | 103 | 105 | 90 | 106 | 104 | 136 |
| Europe, total | 709 | 801 | 972 | 950 | 1,104 | 1,150 | 1,254 | 1,258 | 1,245 | 1,461 |
| Belgium | 15 | 31 | 43 | 42 | 24 | 21 | 32 | 25 | 17 | 17 |
| England, United Kingdom | 96 | 100 | 132 | 137 | 154 | 128 | 132 | 117 | 87 | 125 |
| France | 51 | 65 | 67 | 77 | 93 | 96 | 83 | 68 | 73 | 75 |
| Germany | 102 | 123 | 118 | 124 | 164 | 196 | 208 | 170 | 175 | 202 |
| Europe, other | 445 | 482 | 612 | 570 | 669 | 709 | 799 | 878 | 893 | 1,042 |
| East Asia, total | 2,563 | 3,604 | 4,486 | 4,865 | 5,010 | 5,484 | 5,487 | 5,594 | 4,421 | 4,455 |
| Taiwan | 857 | 1,012 | 1,127 | 1,242 | 1,213 | 1,301 | 1,240 | 1,149 | 995 | 871 |
| China, People's Republic of | 620 | 1,150 | 1,793 | 2,045 | 2,227 | 2,531 | 2,752 | 2,952 | 2,225 | 2,378 |
| Hong Kong | 93 | 94 | 121 | 109 | 109 | 95 | 90 | 109 | 81 | 81 |
| Japan | 106 | 147 | 125 | 132 | 132 | 182 | 155 | 167 | 148 | 149 |
| Korea | 753 | 979 | 1,114 | 1,127 | 1,123 | 1,150 | 1,005 | 979 | 818 | 780 |
| Thailand | 76 | 111 | 93 | 87 | 77 | 97 | 113 | 119 | 80 | 114 |
| East Asia, other | 58 | 111 | 113 | 123 | 129 | 128 | 132 | 119 | 74 | 82 |
| West Asia, total | 1,308 | 1,654 | 1,670 | 1,891 | 1,903 | 2,077 | 2,181 | 2,139 | 1,818 | 1,703 |
| India | 536 | 711 | 752 | 861 | 933 | 1,065 | 1,207 | 1,258 | 1,164 | 1,060 |
| Iran | 198 | 258 | 227 | 200 | 203 | 174 | 173 | 147 | 105 | 89 |
| Iraq | 24 | 27 | 24 | 34 | 17 | 22 | 14 | 9 | 7 | 5 |
| Israel | 69 | 79 | 89 | 87 | 89 | 109 | 86 | 84 | 56 | 55 |
| Lebanon | 51 | 45 | 55 | 62 | 50 | 73 | 56 | 53 | 29 | 33 |
| Saudi Arabia | 61 | 63 | 67 | 76 | 46 | 76 | 71 | 74 | 58 | 38 |
| Turkey | 78 | 106 | 100 | 132 | 136 | 144 | 166 | 146 | 140 | 157 |
| West Asia, other | 291 | 365 | 356 | 439 | 429 | 414 | 408 | 368 | 259 | 266 |
| Pacific/Australasia, total | 166 | 175 | 216 | 220 | 227 | 231 | 231 | 232 | 190 | 181 |
| Australia | 41 | 46 | 35 | 40 | 47 | 56 | 61 | 42 | 47 | 45 |
| Indonesia | 52 | 53 | 69 | 78 | 78 | 83 | 83 | 69 | 59 | 55 |
| Pacific/Australasia, other | 73 | 76 | 112 | 102 | 102 | 92 | 87 | 121 | 84 | 81 |
| Africa, total | 446 | 539 | 500 | 510 | 474 | 583 | 423 | 441 | 322 | 329 |
| Egypt | 109 | 160 | 112 | 101 | 88 | 104 | 78 | 89 | 69 | 77 |
| Nigeria | 59 | 83 | 83 | 68 | 55 | 60 | 53 | 39 | 21 | 34 |
| Africa, other | 278 | 296 | 305 | 341 | 331 | 419 | 292 | 313 | 232 | 218 |
| Country unknown | 623 | 206 | 170 | 130 | 136 | 62 | 63 | 160 | 417 | 98 |

See explanatory information, if any, and SOURCE at end of table.

**Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates,
by country of citizenship, visa type, and year of doctorate: 1989-98**

| Country of citizenship | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total non-U.S. citizens, engineering | | | | | | | | | | |
| Total foreign citizenship | 2,305 | 2,666 | 3,021 | 3,154 | 3,253 | 3,491 | 3,480 | 3,508 | 2,984 | 2,870 |
| North America, total | 76 | 84 | 84 | 73 | 82 | 90 | 82 | 96 | 81 | 92 |
| Canada | 38 | 41 | 54 | 46 | 42 | 36 | 41 | 45 | 44 | 35 |
| Caribbean | 5 | 7 | 3 | 5 | 4 | 14 | 7 | 8 | 12 | 15 |
| Central America | 5 | 11 | 5 | 6 | 9 | 10 | 8 | 6 | 2 | 6 |
| Mexico | 28 | 25 | 22 | 16 | 27 | 30 | 26 | 37 | 23 | 36 |
| South America, total | 73 | 84 | 86 | 87 | 97 | 111 | 88 | 117 | 88 | 96 |
| Argentina | 6 | 12 | 12 | 14 | 10 | 7 | 7 | 8 | 14 | 13 |
| Brazil | 30 | 31 | 34 | 31 | 46 | 49 | 46 | 65 | 40 | 46 |
| Chile | 9 | 11 | 8 | 10 | 5 | 8 | 8 | 8 | 1 | 1 |
| Colombia | 5 | 8 | 11 | 9 | 8 | 12 | 10 | 7 | 4 | 7 |
| South America, other | 23 | 22 | 21 | 23 | 28 | 35 | 17 | 29 | 29 | 29 |
| Europe, total | 198 | 205 | 200 | 202 | 244 | 257 | 297 | 235 | 232 | 292 |
| Belgium | 5 | 12 | 9 | 10 | 7 | 7 | 12 | 4 | 4 | 3 |
| England, United Kingdom | 14 | 14 | 14 | 17 | 18 | 14 | 20 | 10 | 11 | 12 |
| France | 18 | 27 | 19 | 25 | 32 | 32 | 24 | 25 | 11 | 23 |
| Germany | 17 | 15 | 8 | 18 | 23 | 29 | 37 | 16 | 27 | 28 |
| Europe, other | 144 | 137 | 150 | 132 | 164 | 175 | 204 | 180 | 179 | 226 |
| East Asia, total | 988 | 1,266 | 1,629 | 1,701 | 1,733 | 1,887 | 1,869 | 1,849 | 1,427 | 1,431 |
| Taiwan | 427 | 476 | 597 | 637 | 592 | 670 | 616 | 572 | 417 | 375 |
| China, People's Republic of | 159 | 328 | 477 | 508 | 543 | 656 | 773 | 801 | 619 | 655 |
| Hong Kong | 38 | 30 | 30 | 37 | 32 | 14 | 20 | 31 | 12 | 26 |
| Japan | 19 | 17 | 29 | 25 | 23 | 46 | 30 | 32 | 37 | 19 |
| Korea | 308 | 360 | 435 | 437 | 484 | 429 | 344 | 323 | 291 | 281 |
| Thailand | 16 | 21 | 20 | 21 | 18 | 34 | 38 | 43 | 35 | 50 |
| East Asia, other | 21 | 34 | 41 | 36 | 41 | 38 | 48 | 47 | 16 | 25 |
| West Asia, total | 577 | 740 | 768 | 863 | 889 | 908 | 961 | 981 | 879 | 792 |
| India | 251 | 314 | 357 | 405 | 448 | 480 | 572 | 618 | 576 | 510 |
| Iran | 110 | 139 | 123 | 110 | 95 | 92 | 85 | 66 | 58 | 43 |
| Iraq | 9 | 14 | 11 | 14 | 6 | 9 | 8 | 2 | 5 | 3 |
| Israel | 19 | 22 | 27 | 26 | 23 | 17 | 19 | 20 | 12 | 11 |
| Lebanon | 25 | 35 | 38 | 37 | 27 | 45 | 31 | 21 | 9 | 17 |
| Saudi Arabia | 26 | 22 | 26 | 31 | 19 | 28 | 25 | 34 | 28 | 17 |
| Turkey | 52 | 59 | 64 | 81 | 74 | 64 | 73 | 72 | 85 | 79 |
| West Asia, other | 85 | 135 | 122 | 159 | 197 | 173 | 148 | 148 | 106 | 112 |
| Pacific/Australasia, total | 26 | 25 | 45 | 48 | 43 | 50 | 44 | 38 | 44 | 45 |
| Australia | 2 | 3 | 7 | 11 | 6 | 11 | 7 | 6 | 8 | 4 |
| Indonesia | 12 | 14 | 19 | 24 | 29 | 28 | 29 | 15 | 20 | 27 |
| Pacific/Australasia, other | 12 | 8 | 19 | 13 | 8 | 11 | 8 | 17 | 16 | 14 |
| Africa, total | 140 | 187 | 155 | 138 | 121 | 168 | 122 | 143 | 103 | 102 |
| Egypt | 49 | 82 | 57 | 46 | 48 | 63 | 48 | 59 | 44 | 56 |
| Nigeria | 11 | 23 | 20 | 11 | 12 | 6 | 14 | 11 | 7 | 7 |
| Africa, other | 80 | 82 | 78 | 81 | 61 | 99 | 60 | 73 | 52 | 39 |
| Country unknown | 227 | 75 | 54 | 42 | 44 | 20 | 17 | 49 | 130 | 20 |

See explanatory information, if any, and SOURCE at end of table.

**Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates,
by country of citizenship, visa type, and year of doctorate: 1989-98**

| Country of citizenship | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Total non-U.S. citizens, sciences | | | | | | | | | |
| Total foreign citizenship | 4,210 | 5,102 | 5,905 | 6,321 | 6,501 | 7,051 | 7,023 | 7,301 | 6,256 | 6,289 |
| North America, total | 327 | 362 | 441 | 442 | 424 | 457 | 423 | 434 | 374 | 435 |
| Canada | 182 | 212 | 243 | 258 | 243 | 239 | 233 | 231 | 199 | 233 |
| Caribbean | 24 | 29 | 51 | 39 | 34 | 47 | 53 | 43 | 33 | 45 |
| Central America | 29 | 42 | 41 | 46 | 35 | 59 | 35 | 39 | 32 | 32 |
| Mexico | 92 | 79 | 106 | 99 | 112 | 112 | 102 | 121 | 110 | 125 |
| South America, total | 224 | 259 | 301 | 307 | 297 | 297 | 271 | 338 | 284 | 309 |
| Argentina | 37 | 53 | 50 | 72 | 43 | 49 | 42 | 58 | 53 | 58 |
| Brazil | 70 | 69 | 85 | 102 | 105 | 108 | 91 | 140 | 96 | 104 |
| Chile | 38 | 39 | 46 | 38 | 47 | 34 | 30 | 28 | 26 | 22 |
| Colombia | 22 | 32 | 38 | 28 | 27 | 36 | 35 | 35 | 34 | 18 |
| South America, other | 57 | 66 | 82 | 67 | 75 | 70 | 73 | 77 | 75 | 107 |
| Europe, total | 511 | 596 | 772 | 748 | 860 | 893 | 957 | 1,023 | 1,013 | 1,169 |
| Belgium | 10 | 19 | 34 | 32 | 17 | 14 | 20 | 21 | 13 | 14 |
| England, United Kingdom | 82 | 86 | 118 | 120 | 136 | 114 | 112 | 107 | 76 | 113 |
| France | 33 | 38 | 48 | 52 | 61 | 64 | 59 | 43 | 62 | 52 |
| Germany | 85 | 108 | 110 | 106 | 141 | 167 | 171 | 154 | 148 | 174 |
| Europe, other | 301 | 345 | 462 | 438 | 505 | 534 | 595 | 698 | 714 | 816 |
| East Asia, total | 1,575 | 2,338 | 2,857 | 3,164 | 3,277 | 3,597 | 3,618 | 3,745 | 2,994 | 3,024 |
| Taiwan | 430 | 536 | 530 | 605 | 621 | 631 | 624 | 577 | 578 | 496 |
| China, People's Republic of | 461 | 822 | 1,316 | 1,537 | 1,684 | 1,875 | 1,979 | 2,151 | 1,606 | 1,723 |
| Hong Kong | 55 | 64 | 91 | 72 | 77 | 81 | 70 | 78 | 69 | 55 |
| Japan | 87 | 130 | 96 | 107 | 109 | 136 | 125 | 135 | 111 | 130 |
| Korea | 445 | 619 | 679 | 690 | 639 | 721 | 661 | 656 | 527 | 499 |
| Thailand | 60 | 90 | 73 | 66 | 59 | 63 | 75 | 76 | 45 | 64 |
| East Asia, other | 37 | 77 | 72 | 87 | 88 | 90 | 84 | 72 | 58 | 57 |
| West Asia, total | 731 | 914 | 902 | 1,028 | 1,014 | 1,169 | 1,220 | 1,158 | 939 | 911 |
| India | 285 | 397 | 395 | 456 | 485 | 585 | 635 | 640 | 588 | 550 |
| Iran | 88 | 119 | 104 | 90 | 108 | 82 | 88 | 81 | 47 | 46 |
| Iraq | 15 | 13 | 13 | 20 | 11 | 13 | 6 | 7 | 2 | 2 |
| Israel | 50 | 57 | 62 | 61 | 66 | 92 | 67 | 64 | 44 | 44 |
| Lebanon | 26 | 10 | 17 | 25 | 23 | 28 | 25 | 32 | 20 | 16 |
| Saudi Arabia | 35 | 41 | 41 | 45 | 27 | 48 | 46 | 40 | 30 | 21 |
| Turkey | 26 | 47 | 36 | 51 | 62 | 80 | 93 | 74 | 55 | 78 |
| West Asia, other | 206 | 230 | 234 | 280 | 232 | 241 | 260 | 220 | 153 | 154 |
| Pacific/Australasia, total | 140 | 150 | 171 | 172 | 184 | 181 | 187 | 194 | 146 | 136 |
| Australia | 39 | 43 | 28 | 29 | 41 | 45 | 54 | 36 | 39 | 41 |
| Indonesia | 40 | 39 | 50 | 54 | 49 | 55 | 54 | 54 | 39 | 28 |
| Pacific/Australasia, other | 61 | 68 | 93 | 89 | 94 | 81 | 79 | 104 | 68 | 67 |
| Africa, total | 306 | 352 | 345 | 372 | 353 | 415 | 301 | 298 | 219 | 227 |
| Egypt | 60 | 78 | 55 | 55 | 40 | 41 | 30 | 30 | 25 | 21 |
| Nigeria | 48 | 60 | 63 | 57 | 43 | 54 | 39 | 28 | 14 | 27 |
| Africa, other | 198 | 214 | 227 | 260 | 270 | 320 | 232 | 240 | 180 | 179 |
| Country unknown | 396 | 131 | 116 | 88 | 92 | 42 | 46 | 111 | 287 | 78 |

See explanatory information, if any, and SOURCE at end of table.

**Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates,
by country of citizenship, visa type, and year of doctorate: 1989-98**

| Country of citizenship | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Permanent visas, S&E | | | | | | | | | |
| Total foreign citizenship | 1,124 | 1,197 | 1,285 | 1,383 | 1,641 | 3,021 | 3,509 | 3,007 | 2,277 | 2,016 |
| North America, total | 88 | 99 | 126 | 118 | 120 | 119 | 135 | 119 | 104 | 110 |
| Canada | 55 | 55 | 75 | 76 | 71 | 58 | 78 | 70 | 53 | 65 |
| Caribbean | 8 | 16 | 19 | 16 | 15 | 28 | 26 | 27 | 20 | 21 |
| Central America | 9 | 11 | 11 | 8 | 6 | 14 | 8 | 2 | 8 | 5 |
| Mexico | 16 | 17 | 21 | 18 | 28 | 19 | 23 | 20 | 23 | 19 |
| South America, total | 41 | 67 | 62 | 74 | 63 | 64 | 51 | 64 | 69 | 52 |
| Argentina | 4 | 11 | 16 | 17 | 17 | 13 | 9 | 17 | 20 | 8 |
| Brazil | 9 | 13 | 8 | 21 | 11 | 16 | 11 | 11 | 7 | 11 |
| Chile | 6 | 7 | 6 | 6 | 7 | 4 | 9 | 5 | 7 | 7 |
| Colombia | 7 | 11 | 11 | 9 | 5 | 13 | 8 | 10 | 6 | 5 |
| South America, other | 15 | 25 | 21 | 21 | 23 | 18 | 14 | 21 | 29 | 21 |
| Europe, total | 159 | 179 | 211 | 210 | 258 | 275 | 284 | 312 | 336 | 359 |
| Belgium | 3 | 6 | 8 | 8 | 8 | 4 | 7 | 8 | 8 | 3 |
| England, United Kingdom | 36 | 38 | 52 | 58 | 47 | 56 | 49 | 50 | 39 | 44 |
| France | 14 | 15 | 12 | 10 | 19 | 16 | 15 | 16 | 23 | 25 |
| Germany | 24 | 38 | 25 | 39 | 45 | 62 | 53 | 51 | 42 | 42 |
| Europe, other | 82 | 82 | 114 | 95 | 139 | 137 | 160 | 187 | 224 | 245 |
| East Asia, total | 264 | 323 | 407 | 486 | 663 | 2,001 | 2,487 | 1,935 | 1,233 | 1,076 |
| Taiwan | 142 | 147 | 160 | 172 | 155 | 178 | 165 | 136 | 147 | 102 |
| China, People's Republic of | 36 | 54 | 100 | 162 | 352 | 1,642 | 2,169 | 1,628 | 952 | 847 |
| Hong Kong | 15 | 12 | 16 | 28 | 20 | 20 | 15 | 18 | 15 | 14 |
| Japan | 13 | 23 | 20 | 18 | 20 | 30 | 19 | 23 | 23 | 21 |
| Korea | 52 | 70 | 91 | 83 | 91 | 99 | 87 | 93 | 80 | 71 |
| Thailand | 4 | 2 | 8 | 9 | 11 | 11 | 10 | 14 | 4 | 8 |
| East Asia, other | 2 | 15 | 12 | 14 | 14 | 21 | 22 | 23 | 12 | 13 |
| West Asia, total | 279 | 346 | 287 | 340 | 359 | 375 | 383 | 389 | 314 | 259 |
| India | 94 | 119 | 108 | 148 | 142 | 173 | 168 | 199 | 187 | 135 |
| Iran | 93 | 125 | 83 | 82 | 100 | 65 | 84 | 74 | 36 | 38 |
| Iraq | 2 | 3 | 3 | 8 | 4 | 7 | 5 | 4 | 1 | 3 |
| Israel | 20 | 11 | 18 | 15 | 22 | 41 | 21 | 17 | 17 | 17 |
| Lebanon | 14 | 18 | 10 | 6 | 11 | 12 | 11 | 11 | 6 | 7 |
| Saudi Arabia | 6 | 6 | 2 | 7 | 4 | 7 | 4 | 10 | 1 | 0 |
| Turkey | 11 | 17 | 11 | 20 | 18 | 15 | 19 | 23 | 21 | 17 |
| West Asia, other | 39 | 47 | 52 | 54 | 58 | 55 | 71 | 51 | 45 | 42 |
| Pacific/Australasia, total | 19 | 25 | 34 | 23 | 35 | 40 | 43 | 32 | 30 | 25 |
| Australia | 8 | 12 | 9 | 9 | 10 | 13 | 10 | 13 | 9 | 6 |
| Indonesia | 5 | 3 | 9 | 5 | 6 | 13 | 16 | 3 | 8 | 7 |
| Pacific/Australasia, other | 6 | 10 | 16 | 9 | 19 | 14 | 17 | 16 | 13 | 12 |
| Africa, total | 80 | 92 | 103 | 95 | 100 | 123 | 91 | 82 | 83 | 82 |
| Egypt | 13 | 14 | 13 | 9 | 9 | 12 | 12 | 11 | 12 | 12 |
| Nigeria | 20 | 30 | 35 | 34 | 30 | 33 | 32 | 17 | 7 | 15 |
| Africa, other | 47 | 48 | 55 | 52 | 61 | 78 | 47 | 54 | 64 | 55 |
| Country unknown | 194 | 66 | 55 | 37 | 43 | 24 | 35 | 74 | 108 | 53 |

See explanatory information, if any, and SOURCE at end of table.

**Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates,
by country of citizenship, visa type, and year of doctorate: 1989-98**

| Country of citizenship | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|
| Permanent visas, engineering | | | | | | | | | | |
| Total foreign citizenship | 365 | 389 | 388 | 411 | 469 | 838 | 956 | 792 | 593 | 478 |
| North America, total | 12 | 20 | 17 | 13 | 16 | 14 | 23 | 15 | 14 | 17 |
| Canada | 9 | 9 | 14 | 8 | 9 | 6 | 9 | 6 | 7 | 8 |
| Caribbean | 0 | 4 | 0 | 2 | 2 | 4 | 3 | 5 | 4 | 5 |
| Central America | 0 | 3 | 2 | 2 | 1 | 2 | 4 | 0 | 1 | 0 |
| Mexico | 3 | 4 | 1 | 1 | 4 | 2 | 7 | 4 | 2 | 4 |
| South America, total | 7 | 12 | 12 | 14 | 8 | 13 | 7 | 9 | 12 | 7 |
| Argentina | 0 | 2 | 5 | 4 | 2 | 1 | 1 | 3 | 5 | 0 |
| Brazil | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 3 | 2 | 2 |
| Chile | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| Colombia | 2 | 1 | 1 | 2 | 1 | 4 | 1 | 1 | 2 | 1 |
| South America, other | 3 | 7 | 4 | 5 | 4 | 5 | 2 | 2 | 3 | 4 |
| Europe, total | 30 | 31 | 33 | 33 | 42 | 49 | 68 | 58 | 70 | 68 |
| Belgium | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 3 | 0 |
| England, United Kingdom | 5 | 5 | 3 | 8 | 4 | 7 | 9 | 4 | 4 | 6 |
| France | 2 | 6 | 4 | 3 | 4 | 5 | 3 | 5 | 3 | 6 |
| Germany | 3 | 4 | 0 | 5 | 3 | 11 | 8 | 6 | 6 | 3 |
| Europe, other | 20 | 15 | 25 | 15 | 29 | 25 | 47 | 42 | 54 | 53 |
| East Asia, total | 105 | 128 | 166 | 163 | 221 | 576 | 696 | 515 | 317 | 253 |
| Taiwan | 67 | 69 | 88 | 80 | 73 | 89 | 76 | 77 | 57 | 39 |
| China, People's Republic of | 9 | 19 | 25 | 39 | 88 | 426 | 566 | 378 | 215 | 182 |
| Hong Kong | 5 | 5 | 7 | 10 | 10 | 7 | 5 | 9 | 4 | 4 |
| Japan | 1 | 1 | 5 | 3 | 2 | 5 | 2 | 2 | 3 | 0 |
| Korea | 22 | 30 | 36 | 25 | 43 | 42 | 34 | 36 | 36 | 20 |
| Thailand | 0 | 0 | 1 | 2 | 1 | 1 | 4 | 3 | 0 | 5 |
| East Asia, other | 1 | 4 | 4 | 4 | 4 | 6 | 9 | 10 | 2 | 3 |
| West Asia, total | 122 | 150 | 118 | 144 | 151 | 140 | 119 | 152 | 121 | 96 |
| India | 35 | 42 | 44 | 57 | 56 | 61 | 55 | 78 | 65 | 43 |
| Iran | 55 | 61 | 42 | 44 | 43 | 28 | 29 | 29 | 17 | 19 |
| Iraq | 1 | 1 | 0 | 2 | 2 | 5 | 3 | 0 | 1 | 2 |
| Israel | 2 | 3 | 4 | 5 | 6 | 6 | 0 | 0 | 2 | 2 |
| Lebanon | 7 | 13 | 4 | 4 | 6 | 5 | 3 | 8 | 2 | 5 |
| Saudi Arabia | 1 | 2 | 0 | 1 | 2 | 3 | 3 | 3 | 0 | 0 |
| Turkey | 5 | 10 | 5 | 10 | 6 | 6 | 7 | 12 | 15 | 4 |
| West Asia, other | 16 | 18 | 19 | 21 | 30 | 26 | 19 | 22 | 19 | 21 |
| Pacific/Australasia, total | 3 | 5 | 5 | 7 | 6 | 12 | 9 | 4 | 7 | 7 |
| Australia | 0 | 0 | 2 | 4 | 1 | 4 | 0 | 2 | 1 | 0 |
| Indonesia | 2 | 3 | 3 | 2 | 4 | 7 | 7 | 0 | 4 | 6 |
| Pacific/Australasia, other | 1 | 2 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 1 |
| Africa, total | 17 | 21 | 25 | 23 | 14 | 28 | 28 | 24 | 22 | 20 |
| Egypt | 4 | 7 | 4 | 3 | 3 | 4 | 9 | 4 | 5 | 8 |
| Nigeria | 3 | 5 | 9 | 6 | 3 | 2 | 10 | 5 | 1 | 2 |
| Africa, other | 10 | 9 | 12 | 14 | 8 | 22 | 9 | 15 | 16 | 10 |
| Country unknown | 69 | 22 | 12 | 14 | 11 | 6 | 6 | 15 | 30 | 10 |

See explanatory information, if any, and SOURCE at end of table.

**Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates,
by country of citizenship, visa type, and year of doctorate: 1989-98**

| Country of citizenship | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------|---------------------------|------|------|------|-------|-------|-------|-------|-------|-------|
| | Permanent visas, sciences | | | | | | | | | |
| Total foreign citizenship | 759 | 808 | 897 | 972 | 1,172 | 2,183 | 2,553 | 2,215 | 1,684 | 1,538 |
| North America, total | 76 | 79 | 109 | 105 | 104 | 105 | 112 | 104 | 90 | 93 |
| Canada | 46 | 46 | 61 | 68 | 62 | 52 | 69 | 64 | 46 | 57 |
| Caribbean | 8 | 12 | 19 | 14 | 13 | 24 | 23 | 22 | 16 | 16 |
| Central America | 9 | 8 | 9 | 6 | 5 | 12 | 4 | 2 | 7 | 5 |
| Mexico | 13 | 13 | 20 | 17 | 24 | 17 | 16 | 16 | 21 | 15 |
| South America, total | 34 | 55 | 50 | 60 | 55 | 51 | 44 | 55 | 57 | 45 |
| Argentina | 4 | 9 | 11 | 13 | 15 | 12 | 8 | 14 | 15 | 8 |
| Brazil | 8 | 11 | 6 | 19 | 10 | 14 | 9 | 8 | 5 | 9 |
| Chile | 5 | 7 | 6 | 5 | 7 | 3 | 8 | 5 | 7 | 7 |
| Colombia | 5 | 10 | 10 | 7 | 4 | 9 | 7 | 9 | 4 | 4 |
| South America, other | 12 | 18 | 17 | 16 | 19 | 13 | 12 | 19 | 26 | 17 |
| Europe, total | 129 | 148 | 178 | 177 | 216 | 226 | 216 | 254 | 266 | 291 |
| Belgium | 3 | 5 | 7 | 6 | 6 | 3 | 6 | 7 | 5 | 3 |
| England, United Kingdom | 31 | 33 | 49 | 50 | 43 | 49 | 40 | 46 | 35 | 38 |
| France | 12 | 9 | 8 | 7 | 15 | 11 | 12 | 11 | 20 | 19 |
| Germany | 21 | 34 | 25 | 34 | 42 | 51 | 45 | 45 | 36 | 39 |
| Europe, other | 62 | 67 | 89 | 80 | 110 | 112 | 113 | 145 | 170 | 192 |
| East Asia, total | 159 | 195 | 241 | 323 | 442 | 1,425 | 1,791 | 1,420 | 916 | 823 |
| Taiwan | 75 | 78 | 72 | 92 | 82 | 89 | 89 | 59 | 90 | 63 |
| China, People's Republic of | 27 | 35 | 75 | 123 | 264 | 1,216 | 1,603 | 1,250 | 737 | 665 |
| Hong Kong | 10 | 7 | 9 | 18 | 10 | 13 | 10 | 9 | 11 | 10 |
| Japan | 12 | 22 | 15 | 15 | 18 | 25 | 17 | 21 | 20 | 21 |
| Korea | 30 | 40 | 55 | 58 | 48 | 57 | 53 | 57 | 44 | 51 |
| Thailand | 4 | 2 | 7 | 7 | 10 | 10 | 6 | 11 | 4 | 3 |
| East Asia, other | 1 | 11 | 8 | 10 | 10 | 15 | 13 | 13 | 10 | 10 |
| West Asia, total | 157 | 196 | 169 | 196 | 208 | 235 | 264 | 237 | 193 | 163 |
| India | 59 | 77 | 64 | 91 | 86 | 112 | 113 | 121 | 122 | 92 |
| Iran | 38 | 64 | 41 | 38 | 57 | 37 | 55 | 45 | 19 | 19 |
| Iraq | 1 | 2 | 3 | 6 | 2 | 2 | 2 | 4 | 0 | 1 |
| Israel | 18 | 8 | 14 | 10 | 16 | 35 | 21 | 17 | 15 | 15 |
| Lebanon | 7 | 5 | 6 | 2 | 5 | 7 | 8 | 3 | 4 | 2 |
| Saudi Arabia | 5 | 4 | 2 | 6 | 2 | 4 | 1 | 7 | 1 | 0 |
| Turkey | 6 | 7 | 6 | 10 | 12 | 9 | 12 | 11 | 6 | 13 |
| West Asia, other | 23 | 29 | 33 | 33 | 28 | 29 | 52 | 29 | 26 | 21 |
| Pacific/Australasia, total | 16 | 20 | 29 | 16 | 29 | 28 | 34 | 28 | 23 | 18 |
| Australia | 8 | 12 | 7 | 5 | 9 | 9 | 10 | 11 | 8 | 6 |
| Indonesia | 3 | 0 | 6 | 3 | 2 | 6 | 9 | 3 | 4 | 1 |
| Pacific/Australasia, other | 5 | 8 | 16 | 8 | 18 | 13 | 15 | 14 | 11 | 11 |
| Africa, total | 63 | 71 | 78 | 72 | 86 | 95 | 63 | 58 | 61 | 62 |
| Egypt | 9 | 7 | 9 | 6 | 6 | 8 | 3 | 7 | 7 | 4 |
| Nigeria | 17 | 25 | 26 | 28 | 27 | 31 | 22 | 12 | 6 | 13 |
| Africa, other | 37 | 39 | 43 | 38 | 53 | 56 | 38 | 39 | 48 | 45 |
| Country unknown | 125 | 44 | 43 | 23 | 32 | 18 | 29 | 59 | 78 | 43 |

See explanatory information, if any, and SOURCE at end of table.

**Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates,
by country of citizenship, visa type, and year of doctorate: 1989-98**

| Country of citizenship | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Temporary visas, S&E | | | | | | | | | |
| Total foreign citizenship | 5,391 | 6,571 | 7,641 | 8,092 | 8,113 | 7,521 | 6,994 | 7,802 | 6,963 | 7,143 |
| North America, total | 315 | 347 | 399 | 397 | 386 | 428 | 370 | 411 | 351 | 417 |
| Canada | 165 | 198 | 222 | 228 | 214 | 217 | 196 | 206 | 190 | 203 |
| Caribbean | 21 | 20 | 35 | 28 | 23 | 33 | 34 | 24 | 25 | 39 |
| Central America | 25 | 42 | 35 | 44 | 38 | 55 | 35 | 43 | 26 | 33 |
| Mexico | 104 | 87 | 107 | 97 | 111 | 123 | 105 | 138 | 110 | 142 |
| South America, total | 256 | 276 | 325 | 320 | 331 | 344 | 308 | 391 | 303 | 353 |
| Argentina | 39 | 54 | 46 | 69 | 36 | 43 | 40 | 49 | 47 | 63 |
| Brazil | 91 | 87 | 111 | 112 | 140 | 141 | 126 | 194 | 129 | 139 |
| Chile | 41 | 43 | 48 | 42 | 45 | 38 | 29 | 31 | 20 | 16 |
| Colombia | 20 | 29 | 38 | 28 | 30 | 35 | 37 | 32 | 32 | 20 |
| South America, other | 65 | 63 | 82 | 69 | 80 | 87 | 76 | 85 | 75 | 115 |
| Europe, total | 550 | 622 | 761 | 740 | 846 | 875 | 970 | 946 | 909 | 1,102 |
| Belgium | 12 | 25 | 35 | 34 | 16 | 17 | 25 | 17 | 9 | 14 |
| England, United Kingdom | 60 | 62 | 80 | 79 | 107 | 72 | 83 | 67 | 48 | 81 |
| France | 37 | 50 | 55 | 67 | 74 | 80 | 68 | 52 | 50 | 50 |
| Germany | 78 | 85 | 93 | 85 | 119 | 134 | 155 | 119 | 133 | 160 |
| Europe, other | 363 | 400 | 498 | 475 | 530 | 572 | 639 | 691 | 669 | 797 |
| East Asia, total | 2,299 | 3,281 | 4,079 | 4,379 | 4,347 | 3,483 | 3,000 | 3,659 | 3,188 | 3,379 |
| Taiwan | 715 | 865 | 967 | 1,070 | 1,058 | 1,123 | 1,075 | 1,013 | 848 | 769 |
| China, People's Republic of | 584 | 1,096 | 1,693 | 1,883 | 1,875 | 889 | 583 | 1,324 | 1,273 | 1,531 |
| Hong Kong | 78 | 82 | 105 | 81 | 89 | 75 | 75 | 91 | 66 | 67 |
| Japan | 93 | 124 | 105 | 114 | 112 | 152 | 136 | 144 | 125 | 128 |
| Korea | 701 | 909 | 1,023 | 1,044 | 1,032 | 1,051 | 918 | 886 | 738 | 709 |
| Thailand | 72 | 109 | 85 | 78 | 66 | 86 | 103 | 105 | 76 | 106 |
| East Asia, other | 56 | 96 | 101 | 109 | 115 | 107 | 110 | 96 | 62 | 69 |
| West Asia, total | 1,029 | 1,308 | 1,383 | 1,551 | 1,544 | 1,702 | 1,798 | 1,750 | 1,504 | 1,444 |
| India | 442 | 592 | 644 | 713 | 791 | 892 | 1,039 | 1,059 | 977 | 925 |
| Iran | 105 | 133 | 144 | 118 | 103 | 109 | 89 | 73 | 69 | 51 |
| Iraq | 22 | 24 | 21 | 26 | 13 | 15 | 9 | 5 | 6 | 2 |
| Israel | 49 | 68 | 71 | 72 | 67 | 68 | 65 | 67 | 39 | 38 |
| Lebanon | 37 | 27 | 45 | 56 | 39 | 61 | 45 | 42 | 23 | 26 |
| Saudi Arabia | 55 | 57 | 65 | 69 | 42 | 69 | 67 | 64 | 57 | 38 |
| Turkey | 67 | 89 | 89 | 112 | 118 | 129 | 147 | 123 | 119 | 140 |
| West Asia, other | 252 | 318 | 304 | 385 | 371 | 359 | 337 | 317 | 214 | 224 |
| Pacific/Australasia, total | 147 | 150 | 182 | 197 | 192 | 191 | 188 | 200 | 160 | 156 |
| Australia | 33 | 34 | 26 | 31 | 37 | 43 | 51 | 29 | 38 | 39 |
| Indonesia | 47 | 50 | 60 | 73 | 72 | 70 | 67 | 66 | 51 | 48 |
| Pacific/Australasia, other | 67 | 66 | 96 | 93 | 83 | 78 | 70 | 105 | 71 | 69 |
| Africa, total | 366 | 447 | 397 | 415 | 374 | 460 | 332 | 359 | 239 | 247 |
| Egypt | 96 | 146 | 99 | 92 | 79 | 92 | 66 | 78 | 57 | 65 |
| Nigeria | 39 | 53 | 48 | 34 | 25 | 27 | 21 | 22 | 14 | 19 |
| Africa, other | 231 | 248 | 250 | 289 | 270 | 341 | 245 | 259 | 168 | 163 |
| Country unknown | 429 | 140 | 115 | 93 | 93 | 38 | 28 | 86 | 309 | 45 |

See explanatory information, if any, and SOURCE at end of table.

**Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates,
by country of citizenship, visa type, and year of doctorate: 1989-98**

| Country of citizenship | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Temporary visas, engineering | | | | | | | | | | |
| Total foreign citizenship | 1,940 | 2,277 | 2,633 | 2,743 | 2,784 | 2,653 | 2,524 | 2,716 | 2,391 | 2,392 |
| North America, total | 64 | 64 | 67 | 60 | 66 | 76 | 59 | 81 | 67 | 75 |
| Canada | 29 | 32 | 40 | 38 | 33 | 30 | 32 | 39 | 37 | 27 |
| Caribbean | 5 | 3 | 3 | 3 | 2 | 10 | 4 | 3 | 8 | 10 |
| Central America | 5 | 8 | 3 | 4 | 8 | 8 | 4 | 6 | 1 | 6 |
| Mexico | 25 | 21 | 21 | 15 | 23 | 28 | 19 | 33 | 21 | 32 |
| South America, total | 66 | 72 | 74 | 73 | 89 | 98 | 81 | 108 | 76 | 89 |
| Argentina | 6 | 10 | 7 | 10 | 8 | 6 | 6 | 5 | 9 | 13 |
| Brazil | 29 | 29 | 32 | 29 | 45 | 47 | 44 | 62 | 38 | 44 |
| Chile | 8 | 11 | 8 | 9 | 5 | 7 | 7 | 8 | 1 | 1 |
| Colombia | 3 | 7 | 10 | 7 | 7 | 8 | 9 | 6 | 2 | 6 |
| South America, other | 20 | 15 | 17 | 18 | 24 | 30 | 15 | 27 | 26 | 25 |
| Europe, total | 168 | 174 | 167 | 169 | 202 | 208 | 229 | 177 | 162 | 224 |
| Belgium | 5 | 11 | 8 | 8 | 5 | 6 | 11 | 3 | 1 | 3 |
| England, United Kingdom | 9 | 9 | 11 | 9 | 14 | 7 | 11 | 6 | 7 | 6 |
| France | 16 | 21 | 15 | 22 | 28 | 27 | 21 | 20 | 8 | 17 |
| Germany | 14 | 11 | 8 | 13 | 20 | 18 | 29 | 10 | 21 | 25 |
| Europe, other | 124 | 122 | 125 | 117 | 135 | 150 | 157 | 138 | 125 | 173 |
| East Asia, total | 883 | 1,138 | 1,463 | 1,538 | 1,512 | 1,311 | 1,173 | 1,334 | 1,110 | 1,178 |
| Taiwan | 360 | 407 | 509 | 557 | 519 | 581 | 540 | 495 | 360 | 336 |
| China, People's Republic of | 150 | 309 | 452 | 469 | 455 | 230 | 207 | 423 | 404 | 473 |
| Hong Kong | 33 | 25 | 23 | 27 | 22 | 7 | 15 | 22 | 8 | 22 |
| Japan | 18 | 16 | 24 | 22 | 21 | 41 | 28 | 30 | 34 | 19 |
| Korea | 286 | 330 | 399 | 412 | 441 | 387 | 310 | 287 | 255 | 261 |
| Thailand | 16 | 21 | 19 | 19 | 17 | 33 | 34 | 40 | 35 | 45 |
| East Asia, other | 20 | 30 | 37 | 32 | 37 | 32 | 39 | 37 | 14 | 22 |
| West Asia, total | 455 | 590 | 650 | 719 | 738 | 768 | 842 | 829 | 758 | 696 |
| India | 216 | 272 | 313 | 348 | 392 | 419 | 517 | 540 | 511 | 467 |
| Iran | 55 | 78 | 81 | 66 | 52 | 64 | 56 | 37 | 41 | 24 |
| Iraq | 8 | 13 | 11 | 12 | 4 | 4 | 5 | 2 | 4 | 1 |
| Israel | 17 | 19 | 23 | 21 | 17 | 11 | 19 | 20 | 10 | 9 |
| Lebanon | 18 | 22 | 34 | 33 | 21 | 40 | 28 | 13 | 7 | 12 |
| Saudi Arabia | 25 | 20 | 26 | 30 | 17 | 25 | 22 | 31 | 28 | 17 |
| Turkey | 47 | 49 | 59 | 71 | 68 | 58 | 66 | 60 | 70 | 75 |
| West Asia, other | 69 | 117 | 103 | 138 | 167 | 147 | 129 | 126 | 87 | 91 |
| Pacific/Australasia, total | 23 | 20 | 40 | 41 | 37 | 38 | 35 | 34 | 37 | 38 |
| Australia | 2 | 3 | 5 | 7 | 5 | 7 | 7 | 4 | 7 | 4 |
| Indonesia | 10 | 11 | 16 | 22 | 25 | 21 | 22 | 15 | 16 | 21 |
| Pacific/Australasia, other | 11 | 6 | 19 | 12 | 7 | 10 | 6 | 15 | 14 | 13 |
| Africa, total | 123 | 166 | 130 | 115 | 107 | 140 | 94 | 119 | 81 | 82 |
| Egypt | 45 | 75 | 53 | 43 | 45 | 59 | 39 | 55 | 39 | 48 |
| Nigeria | 8 | 18 | 11 | 5 | 9 | 4 | 4 | 6 | 6 | 5 |
| Africa, other | 70 | 73 | 66 | 67 | 53 | 77 | 51 | 58 | 36 | 29 |
| Country unknown | 158 | 53 | 42 | 28 | 33 | 14 | 11 | 34 | 100 | 10 |

See explanatory information, if any, and SOURCE at end of table.

**Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates,
by country of citizenship, visa type, and year of doctorate: 1989-98**

| Country of citizenship | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-----------------------------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Temporary visas, sciences | | | | | | | | | |
| Total foreign citizenship | 3,451 | 4,294 | 5,008 | 5,349 | 5,329 | 4,868 | 4,470 | 5,086 | 4,572 | 4,751 |
| North America, total | 251 | 283 | 332 | 337 | 320 | 352 | 311 | 330 | 284 | 342 |
| Canada | 136 | 166 | 182 | 190 | 181 | 187 | 164 | 167 | 153 | 176 |
| Caribbean | 16 | 17 | 32 | 25 | 21 | 23 | 30 | 21 | 17 | 29 |
| Central America | 20 | 34 | 32 | 40 | 30 | 47 | 31 | 37 | 25 | 27 |
| Mexico | 79 | 66 | 86 | 82 | 88 | 95 | 86 | 105 | 89 | 110 |
| South America, total | 190 | 204 | 251 | 247 | 242 | 246 | 227 | 283 | 227 | 264 |
| Argentina | 33 | 44 | 39 | 59 | 28 | 37 | 34 | 44 | 38 | 50 |
| Brazil | 62 | 58 | 79 | 83 | 95 | 94 | 82 | 132 | 91 | 95 |
| Chile | 33 | 32 | 40 | 33 | 40 | 31 | 22 | 23 | 19 | 15 |
| Colombia | 17 | 22 | 28 | 21 | 23 | 27 | 28 | 26 | 30 | 14 |
| South America, other | 45 | 48 | 65 | 51 | 56 | 57 | 61 | 58 | 49 | 90 |
| Europe, total | 382 | 448 | 594 | 571 | 644 | 667 | 741 | 769 | 747 | 878 |
| Belgium | 7 | 14 | 27 | 26 | 11 | 11 | 14 | 14 | 8 | 11 |
| England, United Kingdom | 51 | 53 | 69 | 70 | 93 | 65 | 72 | 61 | 41 | 75 |
| France | 21 | 29 | 40 | 45 | 46 | 53 | 47 | 32 | 42 | 33 |
| Germany | 64 | 74 | 85 | 72 | 99 | 116 | 126 | 109 | 112 | 135 |
| Europe, other | 239 | 278 | 373 | 358 | 395 | 422 | 482 | 553 | 544 | 624 |
| East Asia, total | 1,416 | 2,143 | 2,616 | 2,841 | 2,835 | 2,172 | 1,827 | 2,325 | 2,078 | 2,201 |
| Taiwan | 355 | 458 | 458 | 513 | 539 | 542 | 535 | 518 | 488 | 433 |
| China, People's Republic of | 434 | 787 | 1,241 | 1,414 | 1,420 | 659 | 376 | 901 | 869 | 1,058 |
| Hong Kong | 45 | 57 | 82 | 54 | 67 | 68 | 60 | 69 | 58 | 45 |
| Japan | 75 | 108 | 81 | 92 | 91 | 111 | 108 | 114 | 91 | 109 |
| Korea | 415 | 579 | 624 | 632 | 591 | 664 | 608 | 599 | 483 | 448 |
| Thailand | 56 | 88 | 66 | 59 | 49 | 53 | 69 | 65 | 41 | 61 |
| East Asia, other | 36 | 66 | 64 | 77 | 78 | 75 | 71 | 59 | 48 | 47 |
| West Asia, total | 574 | 718 | 733 | 832 | 806 | 934 | 956 | 921 | 746 | 748 |
| India | 226 | 320 | 331 | 365 | 399 | 473 | 522 | 519 | 466 | 458 |
| Iran | 50 | 55 | 63 | 52 | 51 | 45 | 33 | 36 | 28 | 27 |
| Iraq | 14 | 11 | 10 | 14 | 9 | 11 | 4 | 3 | 2 | 1 |
| Israel | 32 | 49 | 48 | 51 | 50 | 57 | 46 | 47 | 29 | 29 |
| Lebanon | 19 | 5 | 11 | 23 | 18 | 21 | 17 | 29 | 16 | 14 |
| Saudi Arabia | 30 | 37 | 39 | 39 | 25 | 44 | 45 | 33 | 29 | 21 |
| Turkey | 20 | 40 | 30 | 41 | 50 | 71 | 81 | 63 | 49 | 65 |
| West Asia, other | 183 | 201 | 201 | 247 | 204 | 212 | 208 | 191 | 127 | 133 |
| Pacific/Australasia, total | 124 | 130 | 142 | 156 | 155 | 153 | 153 | 166 | 123 | 118 |
| Australia | 31 | 31 | 21 | 24 | 32 | 36 | 44 | 25 | 31 | 35 |
| Indonesia | 37 | 39 | 44 | 51 | 47 | 49 | 45 | 51 | 35 | 27 |
| Pacific/Australasia, other | 56 | 60 | 77 | 81 | 76 | 68 | 64 | 90 | 57 | 56 |
| Africa, total | 243 | 281 | 267 | 300 | 267 | 320 | 238 | 240 | 158 | 165 |
| Egypt | 51 | 71 | 46 | 49 | 34 | 33 | 27 | 23 | 18 | 17 |
| Nigeria | 31 | 35 | 37 | 29 | 16 | 23 | 17 | 16 | 8 | 14 |
| Africa, other | 161 | 175 | 184 | 222 | 217 | 264 | 194 | 201 | 132 | 134 |
| Country unknown | 271 | 87 | 73 | 65 | 60 | 24 | 17 | 52 | 209 | 35 |

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

| State and institution | S&E rank* | Total S&E | Engineering | | | | | | Physical sciences | | | |
|----------------------------------------|-----------|-----------|-------------|----------|-------|------------|------------|-------------------|-------------------|---------------------|-----------|-------------------------|
| | | | Total | Chemical | Civil | Electrical | Mechanical | Other engineering | Total | Physics & astronomy | Chemistry | Other physical sciences |
| Total, all institutions | - | 27,272 | 5,919 | 774 | 650 | 1,593 | 1,022 | 1,880 | 3,825 | 1,584 | 2,217 | 24 |
| Alabama, total | 24 | 345 | 86 | 11 | 4 | 15 | 23 | 33 | 48 | 29 | 19 | 0 |
| Alabama A&M University | 261 | 10 | 1 | 0 | 0 | 0 | 0 | 1 | 6 | 6 | 0 | 0 |
| Auburn University | 67 | 138 | 36 | 10 | 3 | 5 | 6 | 12 | 20 | 7 | 13 | 0 |
| United States Sports Academy | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Alabama | 128 | 57 | 17 | 1 | 1 | 4 | 6 | 5 | 8 | 5 | 3 | 0 |
| University of Alabama Birmingham | 95 | 88 | 9 | 0 | 0 | 0 | 0 | 9 | 6 | 4 | 2 | 0 |
| University of Alabama Huntsville | 157 | 41 | 23 | 0 | 0 | 6 | 11 | 6 | 8 | 7 | 1 | 0 |
| University of South Alabama | 256 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alaska, total | 48 | 32 | 4 | 0 | 2 | 0 | 1 | 1 | 5 | 5 | 0 | 0 |
| University of Alaska Fairbanks | 174 | 32 | 4 | 0 | 2 | 0 | 1 | 1 | 5 | 5 | 0 | 0 |
| Arizona, total | 18 | 486 | 100 | 5 | 12 | 33 | 16 | 34 | 73 | 46 | 26 | 1 |
| Arizona State University Main | 45 | 182 | 59 | 3 | 8 | 22 | 7 | 19 | 17 | 10 | 7 | 0 |
| Northern Arizona University | 252 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Arizona | 20 | 292 | 41 | 2 | 4 | 11 | 9 | 15 | 56 | 36 | 19 | 1 |
| Arkansas, total | 41 | 77 | 11 | 2 | 0 | 4 | 1 | 4 | 13 | 5 | 6 | 2 |
| Arkansas State U Main Campus | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of Arkansas | 125 | 60 | 11 | 2 | 0 | 4 | 1 | 4 | 10 | 4 | 6 | 0 |
| U of Arkansas Little Rock | 300 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 2 |
| U of Arkansas for Med Sciences | 240 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| California, total | 1 | 3,397 | 736 | 59 | 67 | 256 | 141 | 213 | 499 | 212 | 283 | 4 |
| Azusa Pacific University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Biola University | 240 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CA Inst Technology | 42 | 190 | 45 | 6 | 4 | 11 | 8 | 16 | 80 | 48 | 30 | 2 |
| CA Sch Prof Psych Berkeley | 121 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CA Sch Prof Psych Fresno | 165 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CA Sch Prof Psych Los Angeles | 106 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CA Sch Prof Psych San Diego | 102 | 77 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Claremont Graduate University | 144 | 47 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Fielding Institute, The | 196 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fuller Theological Seminary CA | 207 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Graduate Theological Union | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loma Linda University | 270 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loma Linda U La Sierra Campus | 300 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Naval Postgraduate School | 261 | 10 | 6 | 0 | 0 | 3 | 0 | 3 | 1 | 1 | 0 | 0 |
| Pacific Grad School of Psych | 191 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pepperdine University Malibu | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rand Grad Sch of Policy Studies | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| San Diego State University | 223 | 20 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Santa Clara University | 308 | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| School of Theology at Claremont | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Scripps Research Institute, The | 213 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 |
| Stanford University | 5 | 468 | 177 | 10 | 9 | 62 | 36 | 60 | 62 | 22 | 40 | 0 |
| United States International U | 203 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of California Berkeley | 2 | 534 | 153 | 18 | 22 | 37 | 43 | 33 | 91 | 37 | 54 | 0 |
| U of California Davis | 21 | 288 | 42 | 6 | 4 | 13 | 4 | 15 | 35 | 11 | 24 | 0 |
| U of California Irvine | 60 | 157 | 36 | 1 | 4 | 9 | 13 | 9 | 39 | 11 | 28 | 0 |
| U of California Los Angeles | 15 | 357 | 75 | 4 | 13 | 28 | 21 | 9 | 53 | 23 | 30 | 0 |
| U of California Riverside | 99 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 4 | 7 | 0 |
| U of California San Diego | 31 | 238 | 50 | 2 | 1 | 18 | 7 | 22 | 37 | 12 | 24 | 1 |
| U of California San Francisco | 111 | 68 | 3 | 0 | 0 | 0 | 0 | 3 | 9 | 1 | 8 | 0 |
| U of California Santa Barbara | 43 | 189 | 61 | 11 | 0 | 31 | 5 | 14 | 31 | 20 | 11 | 0 |
| U of California Santa Cruz | 108 | 73 | 7 | 0 | 0 | 6 | 0 | 1 | 22 | 15 | 7 | 0 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

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| State and institution | Earth, atmos., & ocean sciences | Mathematics | Computer sciences | Biological & agricultural sciences | | | Psychology | Social sciences | Non-S&E, total | Grand total, all fields |
|----------------------------------------|---------------------------------|-------------|-------------------|------------------------------------|------------|--------------|------------|-----------------|----------------|-------------------------|
| | | | | Total | Biological | Agricultural | | | | |
| Total, all institutions | 814 | 1,177 | 923 | 6,883 | 5,848 | 1,035 | 3,681 | 4,050 | 15,411 | 42,683 |
| Alabama, total | 6 | 14 | 11 | 106 | 79 | 27 | 48 | 26 | 229 | 574 |
| Alabama A&M University | 0 | 0 | 0 | 3 | 1 | 2 | 0 | 0 | 0 | 10 |
| Auburn University | 1 | 9 | 2 | 35 | 10 | 25 | 22 | 13 | 54 | 192 |
| United States Sports Academy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 19 |
| University of Alabama | 0 | 2 | 1 | 8 | 8 | 0 | 10 | 11 | 93 | 150 |
| University of Alabama Birmingham ... | 0 | 1 | 4 | 50 | 50 | 0 | 16 | 2 | 53 | 141 |
| University of Alabama Huntsville | 4 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| University of South Alabama | 1 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 10 | 21 |
| Alaska, total | 7 | 0 | 0 | 16 | 13 | 3 | 0 | 0 | 2 | 34 |
| University of Alaska Fairbanks | 7 | 0 | 0 | 16 | 13 | 3 | 0 | 0 | 2 | 34 |
| Arizona, total | 36 | 21 | 9 | 107 | 76 | 31 | 57 | 83 | 273 | 759 |
| Arizona State University Main | 7 | 9 | 7 | 20 | 20 | 0 | 32 | 31 | 110 | 292 |
| Northern Arizona University | 0 | 0 | 0 | 5 | 3 | 2 | 0 | 7 | 44 | 56 |
| University of Arizona | 29 | 12 | 2 | 82 | 53 | 29 | 25 | 45 | 119 | 411 |
| Arkansas, total | 0 | 1 | 0 | 45 | 25 | 20 | 7 | 0 | 92 | 169 |
| Arkansas State U Main Campus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| U of Arkansas | 0 | 1 | 0 | 31 | 11 | 20 | 7 | 0 | 62 | 122 |
| U of Arkansas Little Rock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 31 |
| U of Arkansas for Med Sciences | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 14 |
| California, total | 115 | 129 | 121 | 710 | 665 | 45 | 565 | 522 | 1,334 | 4,731 |
| Azusa Pacific University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Biola University | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 2 | 16 |
| CA Inst Technology | 15 | 11 | 10 | 24 | 24 | 0 | 1 | 4 | 1 | 191 |
| CA Sch Prof Psych Berkeley | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 1 | 63 |
| CA Sch Prof Psych Fresno | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 37 |
| CA Sch Prof Psych Los Angeles | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 0 | 2 | 77 |
| CA Sch Prof Psych San Diego | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 0 | 2 | 79 |
| Claremont Graduate University | 0 | 2 | 1 | 0 | 0 | 0 | 14 | 28 | 48 | 95 |
| Fielding Institute, The | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 1 | 13 | 38 |
| Fuller Theological Seminary CA | 0 | 0 | 1 | 0 | 0 | 0 | 22 | 0 | 8 | 31 |
| Graduate Theological Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 22 |
| Loma Linda University | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 4 | 12 |
| Loma Linda U La Sierra Campus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 4 |
| Naval Postgraduate School | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Pacific Grad School of Psych | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 27 |
| Pepperdine University Malibu | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 32 | 33 |
| Rand Grad Sch of Policy Studies | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| San Diego State University | 0 | 0 | 0 | 7 | 7 | 0 | 11 | 1 | 12 | 32 |
| Santa Clara University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| School of Theology at Claremont | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| Scripps Research Institute, The | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 0 | 22 |
| Stanford University | 28 | 21 | 27 | 75 | 75 | 0 | 13 | 65 | 127 | 595 |
| United States International U | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 1 | 15 | 39 |
| U of California Berkeley | 10 | 33 | 22 | 105 | 92 | 13 | 18 | 102 | 214 | 748 |
| U of California Davis | 5 | 5 | 4 | 156 | 129 | 27 | 8 | 33 | 49 | 337 |
| U of California Irvine | 1 | 1 | 11 | 39 | 39 | 0 | 7 | 23 | 39 | 196 |
| U of California Los Angeles | 18 | 21 | 14 | 66 | 66 | 0 | 19 | 91 | 248 | 605 |
| U of California Riverside | 3 | 9 | 1 | 30 | 27 | 3 | 7 | 22 | 39 | 122 |
| U of California San Diego | 14 | 10 | 9 | 64 | 62 | 2 | 23 | 31 | 30 | 268 |
| U of California San Francisco | 0 | 0 | 0 | 48 | 48 | 0 | 2 | 6 | 23 | 91 |
| U of California Santa Barbara | 6 | 11 | 7 | 19 | 19 | 0 | 18 | 36 | 74 | 263 |
| U of California Santa Cruz | 6 | 2 | 1 | 20 | 20 | 0 | 2 | 13 | 14 | 87 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

| State and institution | S&E rank* | Total S&E | Engineering | | | | | | Physical sciences | | | |
|----------------------------------------|-----------|-----------|-------------|----------|-------|------------|------------|-------------------|-------------------|---------------------|-----------|-------------------------|
| | | | Total | Chemical | Civil | Electrical | Mechanical | Other engineering | Total | Physics & astronomy | Chemistry | Other physical sciences |
| California, continued: | | | | | | | | | | | | |
| University of La Verne | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of the Pacific | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of San Diego | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of San Francisco | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Southern CA | 36 | 218 | 75 | 1 | 10 | 37 | 2 | 25 | 19 | 7 | 11 | 1 |
| Wright Institute, All Campuses | 149 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Colorado, total | 17 | 533 | 126 | 15 | 31 | 40 | 8 | 32 | 77 | 31 | 44 | 2 |
| Colorado School of Mines | 165 | 37 | 17 | 5 | 0 | 1 | 0 | 11 | 3 | 0 | 3 | 0 |
| Colorado State University | 48 | 180 | 35 | 2 | 13 | 14 | 3 | 3 | 25 | 4 | 20 | 1 |
| University of Colorado Boulder | 25 | 274 | 73 | 8 | 18 | 25 | 5 | 17 | 45 | 26 | 18 | 1 |
| University of Denver | 176 | 31 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 2 | 0 |
| University of Northern Colorado | 256 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| Connecticut, total | 22 | 434 | 53 | 14 | 4 | 13 | 12 | 10 | 65 | 28 | 37 | 0 |
| University of Connecticut | 47 | 181 | 34 | 6 | 4 | 8 | 7 | 9 | 22 | 8 | 14 | 0 |
| University of New Haven | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wesleyan University | 232 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 3 | 5 | 0 |
| Yale University | 32 | 236 | 19 | 8 | 0 | 5 | 5 | 1 | 35 | 17 | 18 | 0 |
| Delaware, total | 38 | 111 | 31 | 10 | 4 | 7 | 6 | 4 | 18 | 5 | 13 | 0 |
| University of Delaware | 82 | 111 | 31 | 10 | 4 | 7 | 6 | 4 | 18 | 5 | 13 | 0 |
| Wilmington College | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| District of Columbia, total | 27 | 298 | 39 | 0 | 5 | 6 | 14 | 14 | 36 | 15 | 21 | 0 |
| American University | 144 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 3 | 0 |
| Catholic University of America | 154 | 42 | 9 | 0 | 1 | 1 | 7 | 0 | 11 | 5 | 6 | 0 |
| Gallaudet University | 308 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| George Washington University | 84 | 107 | 27 | 0 | 4 | 3 | 6 | 14 | 8 | 5 | 3 | 0 |
| Georgetown University | 136 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 |
| Howard University | 139 | 49 | 3 | 0 | 0 | 2 | 1 | 0 | 7 | 1 | 6 | 0 |
| Florida, total | 9 | 997 | 185 | 16 | 16 | 62 | 30 | 61 | 125 | 40 | 84 | 1 |
| Barry University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Caribbean Ctr Adv Studies Miami | 176 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FL Agricultural and Mechanical U | 308 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Florida Atlantic University | 207 | 23 | 14 | 0 | 0 | 9 | 1 | 4 | 2 | 2 | 0 | 0 |
| Florida Institute of Technology | 229 | 18 | 8 | 0 | 0 | 5 | 0 | 3 | 2 | 1 | 1 | 0 |
| Florida International University | 187 | 28 | 4 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Florida State University | 72 | 131 | 9 | 1 | 0 | 0 | 0 | 1 | 35 | 16 | 19 | 0 |
| Nova Southeastern University | 41 | 191 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Central Florida | 159 | 40 | 22 | 0 | 3 | 10 | 3 | 6 | 7 | 7 | 0 | 0 |
| University of Florida | 14 | 370 | 97 | 13 | 8 | 24 | 14 | 38 | 71 | 11 | 59 | 1 |
| University of Miami | 91 | 94 | 14 | 0 | 2 | 5 | 2 | 5 | 4 | 3 | 1 | 0 |
| University of Sarasota | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of South Florida | 116 | 65 | 16 | 2 | 3 | 7 | 0 | 4 | 4 | 0 | 4 | 0 |
| Georgia, total | 15 | 616 | 178 | 16 | 22 | 58 | 26 | 56 | 63 | 17 | 45 | 1 |
| Clark Atlanta University | 256 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Emory University | 102 | 77 | 1 | 0 | 0 | 0 | 1 | 0 | 19 | 3 | 16 | 0 |
| Georgia Inst of Tech | 27 | 255 | 175 | 15 | 22 | 58 | 25 | 55 | 25 | 10 | 15 | 0 |
| Georgia Southern University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Georgia State University | 151 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 |
| Inst of Paper Science & Tech | 279 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Medical College of Georgia | 226 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mercer University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Georgia | 39 | 204 | 1 | 0 | 0 | 0 | 0 | 1 | 16 | 2 | 13 | 1 |
| Hawaii, total | 37 | 130 | 7 | 0 | 1 | 3 | 1 | 2 | 20 | 11 | 9 | 0 |
| University of Hawaii at Manoa | 73 | 130 | 7 | 0 | 1 | 3 | 1 | 2 | 20 | 11 | 9 | 0 |
| Idaho, total | 45 | 51 | 9 | 1 | 0 | 1 | 2 | 5 | 10 | 0 | 10 | 0 |
| Idaho State University | 256 | 11 | 3 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 |
| University of Idaho | 159 | 40 | 6 | 1 | 0 | 0 | 2 | 3 | 10 | 0 | 10 | 0 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

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| State and institution | Earth, atmos., & ocean sciences | Mathematics | Computer sciences | Biological & agricultural sciences | | | Psychology | Social sciences | Non-S&E, total | Grand total, all fields |
|----------------------------------------|---------------------------------|-------------|-------------------|------------------------------------|------------|--------------|------------|-----------------|----------------|-------------------------|
| | | | | Total | Biological | Agricultural | | | | |
| California, continued: | | | | | | | | | | |
| University of La Verne | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 40 | 41 |
| University of the Pacific | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 9 | 10 |
| University of San Diego | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 21 | 22 |
| University of San Francisco | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 54 | 58 |
| University of Southern CA | 8 | 2 | 12 | 35 | 35 | 0 | 12 | 55 | 185 | 403 |
| Wright Institute, All Campuses | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 45 |
| Colorado, total | | | | | | | | | | |
| Colorado School of Mines | 52 | 18 | 15 | 121 | 93 | 28 | 49 | 75 | 231 | 764 |
| Colorado State University | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 37 |
| University of Colorado Boulder | 14 | 5 | 2 | 69 | 41 | 28 | 16 | 14 | 32 | 212 |
| University of Denver | 24 | 11 | 10 | 52 | 52 | 0 | 11 | 48 | 101 | 375 |
| University of Northern Colorado | 1 | 0 | 3 | 0 | 0 | 0 | 14 | 9 | 43 | 74 |
| University of Northern Colorado | 0 | 1 | 0 | 0 | 0 | 0 | 8 | 1 | 55 | 66 |
| Connecticut, total | | | | | | | | | | |
| University of Connecticut | 10 | 18 | 13 | 136 | 129 | 7 | 44 | 95 | 204 | 638 |
| University of New Haven | 4 | 9 | 7 | 53 | 50 | 3 | 22 | 30 | 73 | 254 |
| Wesleyan University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Yale University | 0 | 3 | 0 | 6 | 6 | 0 | 0 | 0 | 2 | 19 |
| Yale University | 6 | 6 | 6 | 77 | 73 | 4 | 22 | 65 | 126 | 362 |
| Delaware, total | | | | | | | | | | |
| University of Delaware | 10 | 4 | 3 | 15 | 14 | 1 | 9 | 21 | 62 | 173 |
| Wilmington College | 10 | 4 | 3 | 15 | 14 | 1 | 9 | 21 | 33 | 144 |
| Wilmington College | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 29 |
| District of Columbia, total | | | | | | | | | | |
| American University | 2 | 9 | 12 | 53 | 52 | 1 | 53 | 94 | 206 | 504 |
| Catholic University of America | 0 | 1 | 0 | 2 | 2 | 0 | 8 | 29 | 15 | 62 |
| Gallaudet University | 0 | 0 | 0 | 6 | 6 | 0 | 12 | 4 | 67 | 109 |
| George Washington University | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 5 |
| George Washington University | 2 | 6 | 12 | 15 | 15 | 0 | 14 | 23 | 69 | 176 |
| Georgetown University | 0 | 0 | 0 | 16 | 16 | 0 | 5 | 27 | 29 | 80 |
| Howard University | 0 | 2 | 0 | 14 | 13 | 1 | 12 | 11 | 23 | 72 |
| Florida, total | | | | | | | | | | |
| Barry University | 27 | 33 | 62 | 180 | 128 | 52 | 276 | 109 | 948 | 1,945 |
| Caribbean Ctr Adv Studies Miami | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 |
| FL Agricultural and Mechanical U | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| Florida Atlantic University | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 4 | 26 | 49 |
| Florida Institute of Technology | 0 | 3 | 3 | 2 | 2 | 0 | 0 | 0 | 2 | 20 |
| Florida International University | 0 | 0 | 2 | 3 | 3 | 0 | 5 | 14 | 43 | 71 |
| Florida State University | 5 | 7 | 7 | 19 | 19 | 0 | 26 | 23 | 175 | 306 |
| Nova Southeastern University | 1 | 0 | 35 | 0 | 0 | 0 | 149 | 6 | 352 | 543 |
| University of Central Florida | 1 | 2 | 4 | 0 | 0 | 0 | 4 | 0 | 29 | 69 |
| University of Florida | 3 | 13 | 3 | 111 | 59 | 52 | 28 | 44 | 87 | 457 |
| University of Miami | 10 | 1 | 1 | 30 | 30 | 0 | 20 | 14 | 50 | 144 |
| University of Sarasota | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 83 | 87 |
| University of South Florida | 7 | 7 | 4 | 13 | 13 | 0 | 11 | 3 | 88 | 153 |
| Georgia, total | | | | | | | | | | |
| Clark Atlanta University | 9 | 24 | 18 | 173 | 133 | 40 | 88 | 63 | 376 | 992 |
| Emory University | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 7 | 40 | 51 |
| Georgia Inst of Tech | 0 | 5 | 0 | 32 | 32 | 0 | 1 | 19 | 58 | 135 |
| Georgia Southern University | 8 | 11 | 17 | 9 | 9 | 0 | 10 | 0 | 7 | 262 |
| Georgia Southern University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| Georgia State University | 0 | 0 | 1 | 5 | 5 | 0 | 26 | 9 | 93 | 137 |
| Inst of Paper Science & Tech | 0 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 6 |
| Medical College of Georgia | 0 | 0 | 0 | 19 | 19 | 0 | 0 | 0 | 3 | 22 |
| Mercer University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| University of Georgia | 1 | 8 | 0 | 102 | 67 | 35 | 48 | 28 | 165 | 369 |
| Hawaii, total | | | | | | | | | | |
| University of Hawaii at Manoa | 12 | 1 | 5 | 38 | 31 | 7 | 7 | 40 | 29 | 159 |
| University of Hawaii at Manoa | 12 | 1 | 5 | 38 | 31 | 7 | 7 | 40 | 29 | 159 |
| Idaho, total | | | | | | | | | | |
| Idaho State University | 2 | 4 | 1 | 24 | 14 | 10 | 0 | 1 | 39 | 90 |
| University of Idaho | 0 | 2 | 0 | 5 | 5 | 0 | 0 | 1 | 8 | 19 |
| University of Idaho | 2 | 2 | 1 | 19 | 9 | 10 | 0 | 0 | 31 | 71 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

| State and institution | S&E rank* | Total S&E | Engineering | | | | | | Physical sciences | | | |
|----------------------------------------|-----------|-----------|-------------|----------|-------|------------|------------|-------------------|-------------------|---------------------|-----------|-------------------------|
| | | | Total | Chemical | Civil | Electrical | Mechanical | Other engineering | Total | Physics & astronomy | Chemistry | Other physical sciences |
| Illinois, total | 5 | 1,467 | 352 | 40 | 38 | 95 | 63 | 116 | 213 | 95 | 117 | 1 |
| De Paul University | 245 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Finch U Hlth Sci/Chgo Med Sch | 232 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois Institute Technology | 108 | 73 | 32 | 7 | 6 | 7 | 2 | 10 | 5 | 2 | 3 | 0 |
| Illinois State University | 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Inst for Clinical Social Work | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loyola University of Chicago | 127 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |
| Lutheran Sch Theology at Chicago | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Northern Illinois University | 172 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 0 |
| Northwestern University | 22 | 285 | 94 | 10 | 9 | 13 | 20 | 42 | 33 | 14 | 19 | 0 |
| Roosevelt University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rush University | 282 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| Southern Illinois U Carbondale | 128 | 57 | 6 | 0 | 1 | 2 | 0 | 3 | 7 | 2 | 5 | 0 |
| Southern Illinois U Edwardsville | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Chicago | 32 | 236 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 28 | 17 | 1 |
| U of Illinois Chicago | 62 | 155 | 45 | 3 | 1 | 11 | 17 | 13 | 28 | 8 | 20 | 0 |
| U of Illinois Urbana-Champaign | 3 | 525 | 175 | 20 | 21 | 62 | 24 | 48 | 86 | 40 | 46 | 0 |
| Indiana, total | 11 | 689 | 170 | 30 | 25 | 46 | 26 | 43 | 122 | 26 | 96 | 0 |
| Ball State University | 237 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Indiana State University | 229 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Indiana U Bloomington | 52 | 175 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 9 | 24 | 0 |
| Indiana U Purdue U Indianapolis | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Purdue University | 12 | 389 | 139 | 20 | 22 | 37 | 21 | 39 | 77 | 11 | 66 | 0 |
| University of Notre Dame | 94 | 90 | 31 | 10 | 3 | 9 | 5 | 4 | 12 | 6 | 6 | 0 |
| Iowa, total | 23 | 423 | 104 | 15 | 11 | 24 | 22 | 32 | 70 | 19 | 51 | 0 |
| Drake University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Iowa State University | 29 | 252 | 66 | 11 | 6 | 19 | 12 | 18 | 45 | 15 | 30 | 0 |
| Maharishi U of Management | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Iowa | 57 | 165 | 36 | 4 | 5 | 5 | 10 | 12 | 25 | 4 | 21 | 0 |
| University of Northern Iowa | 308 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Kansas, total | 28 | 287 | 50 | 4 | 15 | 9 | 5 | 17 | 44 | 9 | 35 | 0 |
| Kansas State University | 77 | 123 | 23 | 3 | 9 | 1 | 0 | 10 | 10 | 4 | 6 | 0 |
| University of Kansas | 67 | 138 | 15 | 1 | 6 | 4 | 2 | 2 | 30 | 5 | 25 | 0 |
| Wichita State University | 193 | 26 | 12 | 0 | 0 | 4 | 3 | 5 | 4 | 0 | 4 | 0 |
| Kentucky, total | 33 | 202 | 29 | 2 | 2 | 7 | 8 | 10 | 25 | 7 | 18 | 0 |
| Southern Baptist Theological Sem | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spalding University | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Kentucky | 65 | 149 | 21 | 1 | 2 | 3 | 8 | 7 | 16 | 7 | 9 | 0 |
| University of Louisville | 136 | 51 | 8 | 1 | 0 | 4 | 0 | 3 | 9 | 0 | 9 | 0 |
| Louisiana, total | 26 | 321 | 49 | 14 | 8 | 11 | 4 | 12 | 39 | 10 | 28 | 1 |
| Grambling State University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA St U & A&M College | 53 | 171 | 33 | 9 | 8 | 3 | 3 | 10 | 23 | 8 | 14 | 1 |
| LA St U Shreveport | 308 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LA St U Medical Center | 229 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Louisiana Tech University | 300 | 3 | 3 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 |
| New Orleans Baptist Theol Sem | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Northeast Louisiana University | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| Tulane University | 102 | 77 | 9 | 5 | 0 | 3 | 1 | 0 | 9 | 2 | 7 | 0 |
| University of New Orleans | 196 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 |
| U of Southwestern Louisiana | 217 | 21 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maine, total | 47 | 34 | 5 | 4 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |
| University of Maine | 172 | 34 | 5 | 4 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

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| State and institution | Earth, atmos., & ocean sciences | Mathematics | Computer sciences | Biological & agricultural sciences | | | Psychology | Social sciences | Non-S&E, total | Grand total, all fields |
|----------------------------------------|---------------------------------|-------------|-------------------|------------------------------------|------------|--------------|------------|-----------------|----------------|-------------------------|
| | | | | Total | Biological | Agricultural | | | | |
| Illinois, total | 23 | 69 | 65 | 300 | 263 | 37 | 176 | 269 | 793 | 2,260 |
| De Paul University | 0 | 0 | 2 | 0 | 0 | 0 | 11 | 0 | 3 | 16 |
| Finch U Hlth Sci/Chgo Med Sch | 0 | 0 | 0 | 8 | 8 | 0 | 9 | 0 | 1 | 18 |
| Illinois Institute Technology | 0 | 0 | 14 | 6 | 6 | 0 | 16 | 0 | 2 | 75 |
| Illinois State University | 0 | 2 | 0 | 3 | 3 | 0 | 1 | 1 | 44 | 51 |
| Inst for Clinical Social Work | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 8 |
| Loyola University of Chicago | 0 | 1 | 0 | 23 | 23 | 0 | 26 | 7 | 69 | 128 |
| Lutheran Sch Theology at Chicago | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Northern Illinois University | 0 | 2 | 0 | 2 | 2 | 0 | 12 | 13 | 82 | 116 |
| Northwestern University | 4 | 16 | 9 | 44 | 44 | 0 | 32 | 53 | 86 | 371 |
| Roosevelt University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 |
| Rush University | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 1 | 21 | 26 |
| Southern Illinois U Carbondale | 0 | 2 | 2 | 12 | 10 | 2 | 15 | 13 | 81 | 138 |
| Southern Illinois U Edwardsville | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| University of Chicago | 7 | 20 | 5 | 51 | 51 | 0 | 10 | 97 | 132 | 368 |
| U of Illinois Chicago | 3 | 9 | 6 | 42 | 42 | 0 | 6 | 16 | 65 | 220 |
| U of Illinois Urbana-Champaign | 9 | 17 | 27 | 106 | 71 | 35 | 37 | 68 | 181 | 706 |
| Indiana, total | 11 | 30 | 23 | 156 | 119 | 37 | 67 | 110 | 395 | 1,084 |
| Ball State University | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 4 | 33 | 49 |
| Indiana State University | 0 | 0 | 0 | 3 | 3 | 0 | 12 | 3 | 9 | 27 |
| Indiana U Bloomington | 4 | 12 | 10 | 44 | 44 | 0 | 19 | 53 | 205 | 380 |
| Indiana U Purdue U Indianapolis | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 14 | 15 |
| Purdue University | 7 | 14 | 10 | 90 | 53 | 37 | 19 | 33 | 107 | 496 |
| University of Notre Dame | 0 | 4 | 3 | 18 | 18 | 0 | 5 | 17 | 27 | 117 |
| Iowa, total | 7 | 28 | 7 | 114 | 79 | 35 | 38 | 55 | 226 | 649 |
| Drake University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| Iowa State University | 2 | 13 | 4 | 75 | 40 | 35 | 22 | 25 | 48 | 300 |
| Maharishi U of Management | 0 | 0 | 0 | 3 | 3 | 0 | 1 | 0 | 1 | 5 |
| University of Iowa | 5 | 15 | 3 | 36 | 36 | 0 | 15 | 30 | 162 | 327 |
| University of Northern Iowa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 11 |
| Kansas, total | 5 | 11 | 3 | 87 | 62 | 25 | 48 | 39 | 198 | 485 |
| Kansas State University | 1 | 6 | 3 | 52 | 27 | 25 | 12 | 16 | 38 | 161 |
| University of Kansas | 4 | 0 | 0 | 35 | 35 | 0 | 31 | 23 | 149 | 287 |
| Wichita State University | 0 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 11 | 37 |
| Kentucky, total | 2 | 16 | 1 | 81 | 69 | 12 | 29 | 19 | 140 | 342 |
| Southern Baptist Theological Sem | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 29 | 30 |
| Spalding University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 10 |
| University of Kentucky | 2 | 16 | 0 | 61 | 49 | 12 | 18 | 15 | 78 | 227 |
| University of Louisville | 0 | 0 | 1 | 20 | 20 | 0 | 11 | 2 | 24 | 75 |
| Louisiana, total | 7 | 18 | 16 | 113 | 96 | 17 | 36 | 43 | 234 | 555 |
| Grambling State University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 10 |
| LA St U & A&M College | 7 | 5 | 6 | 56 | 39 | 17 | 22 | 19 | 87 | 258 |
| LA St U Shreveport | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| LA St U Medical Center | 0 | 0 | 0 | 18 | 18 | 0 | 0 | 0 | 5 | 23 |
| Louisiana Tech University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 9 |
| New Orleans Baptist Theol Sem | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 25 |
| Northeast Louisiana University | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 7 | 11 |
| Tulane University | 0 | 9 | 3 | 28 | 28 | 0 | 6 | 13 | 49 | 126 |
| University of New Orleans | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 11 | 36 | 61 |
| U of Southwestern Louisiana | 0 | 4 | 7 | 6 | 6 | 0 | 0 | 0 | 9 | 30 |
| Maine, total | 4 | 0 | 0 | 16 | 10 | 6 | 7 | 0 | 16 | 50 |
| University of Maine | 4 | 0 | 0 | 16 | 10 | 6 | 7 | 0 | 16 | 50 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

| State and institution | S&E rank* | Total S&E | Engineering | | | | | | Physical sciences | | | |
|----------------------------------|-----------|-----------|-------------|----------|-------|------------|------------|-------------------|-------------------|---------------------|-----------|-------------------------|
| | | | Total | Chemical | Civil | Electrical | Mechanical | Other engineering | Total | Physics & astronomy | Chemistry | Other physical sciences |
| Maryland, total | 12 | 657 | 144 | 14 | 10 | 49 | 35 | 36 | 93 | 55 | 38 | 0 |
| Johns Hopkins University | 30 | 243 | 43 | 6 | 5 | 8 | 8 | 16 | 33 | 20 | 13 | 0 |
| Loyola College | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Morgan State University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peabody Inst of Johns Hopkins U | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Uniformed Services U of Hlth Sci | 261 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of Maryland Baltimore | 161 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 |
| U of Maryland Baltimore County | 136 | 51 | 19 | 1 | 0 | 7 | 9 | 2 | 4 | 0 | 4 | 0 |
| U of Maryland College Park | 18 | 308 | 82 | 7 | 5 | 34 | 18 | 18 | 53 | 35 | 18 | 0 |
| U of Maryland Eastern Shore | 308 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Massachusetts, total | 4 | 1,533 | 377 | 75 | 26 | 95 | 56 | 125 | 248 | 128 | 119 | 1 |
| American International College | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Boston College | 168 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 5 | 2 | 0 |
| Boston University | 56 | 170 | 14 | 1 | 0 | 4 | 4 | 5 | 23 | 15 | 8 | 0 |
| Brandeis University | 111 | 68 | 1 | 0 | 0 | 0 | 0 | 1 | 8 | 3 | 5 | 0 |
| Clark University | 193 | 26 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 0 |
| Harvard University | 16 | 332 | 12 | 0 | 2 | 1 | 0 | 9 | 71 | 38 | 33 | 0 |
| MA Col Pharmacy & Allied Health | 308 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Massachusetts Institute of Tech | 6 | 462 | 229 | 45 | 12 | 52 | 36 | 84 | 69 | 40 | 29 | 0 |
| New England Conserv of Music | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Northeastern University | 99 | 83 | 23 | 0 | 2 | 10 | 6 | 5 | 15 | 6 | 9 | 0 |
| Simmons College | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Smith College | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Springfield College | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tufts University | 114 | 66 | 7 | 1 | 0 | 4 | 2 | 0 | 6 | 3 | 3 | 0 |
| U of Massachusetts Amherst | 44 | 187 | 54 | 22 | 4 | 14 | 3 | 11 | 37 | 13 | 23 | 1 |
| U of Massachusetts Boston | 245 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of Massachusetts Lowell | 170 | 35 | 13 | 5 | 1 | 4 | 2 | 1 | 7 | 2 | 5 | 0 |
| U of Massachusetts Worcester | 193 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Worcester Polytechnic Institute | 191 | 27 | 23 | 0 | 5 | 6 | 0 | 9 | 2 | 2 | 0 | 0 |
| Michigan, total | 8 | 1,027 | 275 | 34 | 28 | 63 | 56 | 94 | 150 | 60 | 90 | 0 |
| Andrews University | 300 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Central Michigan University | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Eastern Michigan University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Michigan State University | 19 | 305 | 46 | 13 | 9 | 10 | 8 | 6 | 46 | 19 | 27 | 0 |
| Michigan Technological U | 147 | 46 | 22 | 2 | 0 | 2 | 10 | 8 | 9 | 6 | 3 | 0 |
| Oakland University | 232 | 17 | 12 | 0 | 0 | 0 | 0 | 12 | 1 | 1 | 0 | 0 |
| University of Detroit Mercy | 279 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| University of Michigan Ann Arbor | 4 | 479 | 175 | 16 | 18 | 44 | 35 | 62 | 67 | 27 | 40 | 0 |
| Wayne State University | 71 | 132 | 19 | 3 | 1 | 7 | 2 | 6 | 25 | 5 | 20 | 0 |
| Western Michigan University | 170 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 |
| Minnesota, total | 19 | 481 | 99 | 16 | 13 | 25 | 21 | 24 | 63 | 24 | 39 | 0 |
| Luther NW Theological Seminary | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mayo Sch Health-Related Sciences | 223 | 20 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| U of Minnesota Twin Cities | 8 | 450 | 98 | 16 | 13 | 25 | 21 | 23 | 63 | 24 | 39 | 0 |
| University of St Thomas | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walden University | 256 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mississippi, total | 36 | 159 | 25 | 1 | 1 | 4 | 3 | 16 | 27 | 2 | 25 | 0 |
| Delta State University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jackson State University | 282 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mississippi State University | 121 | 62 | 14 | 1 | 0 | 2 | 1 | 10 | 4 | 0 | 4 | 0 |
| Reformed Theological Sem | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of Mississippi | 154 | 42 | 10 | 0 | 1 | 2 | 2 | 5 | 12 | 2 | 10 | 0 |
| U of Mississippi Med Ctr | 245 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of Southern Mississippi | 165 | 37 | 1 | 0 | 0 | 0 | 0 | 1 | 11 | 0 | 11 | 0 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

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| State and institution | Earth, atmos., & ocean sciences | Mathematics | Computer sciences | Biological & agricultural sciences | | | Psychology | Social sciences | Non-S&E, total | Grand total, all fields |
|----------------------------------------|---------------------------------|-------------|-------------------|------------------------------------|------------|--------------|------------|-----------------|----------------|-------------------------|
| | | | | Total | Biological | Agricultural | | | | |
| Maryland, total | 17 | 36 | 21 | 171 | 164 | 7 | 72 | 103 | 345 | 1,002 |
| Johns Hopkins University | 9 | 6 | 3 | 84 | 84 | 0 | 14 | 51 | 120 | 363 |
| Loyola College | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| Morgan State University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Peabody Inst of Johns Hopkins U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 22 |
| Uniformed Services U of Hlth Sci | 0 | 0 | 0 | 6 | 6 | 0 | 4 | 0 | 0 | 10 |
| U of Maryland Baltimore | 0 | 0 | 0 | 35 | 35 | 0 | 1 | 0 | 27 | 66 |
| U of Maryland Baltimore County | 0 | 3 | 9 | 4 | 4 | 0 | 6 | 6 | 4 | 55 |
| U of Maryland College Park | 8 | 27 | 9 | 40 | 34 | 6 | 43 | 46 | 168 | 476 |
| U of Maryland Eastern Shore | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 2 |
| Massachusetts, total | 32 | 59 | 53 | 363 | 355 | 8 | 101 | 300 | 641 | 2,174 |
| American International College | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| Boston College | 0 | 0 | 0 | 13 | 13 | 0 | 6 | 10 | 64 | 100 |
| Boston University | 4 | 2 | 6 | 59 | 59 | 0 | 24 | 38 | 108 | 278 |
| Brandeis University | 0 | 5 | 4 | 21 | 21 | 0 | 2 | 27 | 22 | 90 |
| Clark University | 0 | 0 | 0 | 2 | 2 | 0 | 8 | 12 | 5 | 31 |
| Harvard University | 7 | 16 | 7 | 107 | 107 | 0 | 14 | 98 | 228 | 560 |
| MA Col Pharmacy & Allied Health | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| Massachusetts Institute of Tech | 19 | 24 | 17 | 52 | 52 | 0 | 2 | 50 | 30 | 492 |
| New England Conserv of Music | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Northeastern University | 0 | 3 | 2 | 8 | 8 | 0 | 10 | 22 | 4 | 87 |
| Simmons College | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| Smith College | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 |
| Springfield College | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 |
| Tufts University | 1 | 1 | 1 | 33 | 33 | 0 | 6 | 11 | 15 | 81 |
| U of Massachusetts Amherst | 1 | 8 | 8 | 32 | 24 | 8 | 21 | 26 | 111 | 298 |
| U of Massachusetts Boston | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 5 | 2 | 15 |
| U of Massachusetts Lowell | 0 | 0 | 8 | 6 | 6 | 0 | 0 | 1 | 16 | 51 |
| U of Massachusetts Worcester | 0 | 0 | 0 | 26 | 26 | 0 | 0 | 0 | 0 | 26 |
| Worcester Polytechnic Institute | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 27 |
| Michigan, total | 18 | 52 | 23 | 218 | 171 | 47 | 122 | 169 | 482 | 1,509 |
| Andrews University | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 16 | 19 |
| Central Michigan University | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| Eastern Michigan University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Michigan State University | 0 | 12 | 9 | 92 | 58 | 34 | 38 | 62 | 131 | 436 |
| Michigan Technological U | 1 | 0 | 0 | 14 | 7 | 7 | 0 | 0 | 5 | 51 |
| Oakland University | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 6 | 23 |
| University of Detroit Mercy | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 6 |
| University of Michigan Ann Arbor | 14 | 31 | 10 | 63 | 57 | 6 | 38 | 81 | 208 | 687 |
| Wayne State University | 0 | 3 | 4 | 44 | 44 | 0 | 21 | 16 | 88 | 220 |
| Western Michigan University | 3 | 6 | 0 | 1 | 1 | 0 | 13 | 10 | 23 | 58 |
| Minnesota, total | 5 | 18 | 20 | 147 | 108 | 39 | 55 | 74 | 362 | 843 |
| Luther NW Theological Seminary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Mayo Sch Health-Related Sciences | 0 | 0 | 0 | 19 | 19 | 0 | 0 | 0 | 0 | 20 |
| U of Minnesota Twin Cities | 5 | 18 | 20 | 128 | 89 | 39 | 44 | 74 | 274 | 724 |
| University of St Thomas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 20 |
| Walden University | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 63 | 74 |
| Mississippi, total | 5 | 2 | 7 | 50 | 32 | 18 | 28 | 15 | 191 | 350 |
| Delta State University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Jackson State University | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 18 |
| Mississippi State University | 0 | 0 | 1 | 24 | 6 | 18 | 6 | 13 | 41 | 103 |
| Reformed Theological Sem | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| U of Mississippi | 2 | 1 | 3 | 9 | 9 | 0 | 5 | 0 | 58 | 100 |
| U of Mississippi Med Ctr | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 0 | 13 |
| U of Southern Mississippi | 0 | 1 | 3 | 4 | 4 | 0 | 17 | 0 | 75 | 112 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

| State and institution | S&E rank* | Total S&E | Engineering | | | | | | Physical sciences | | | |
|----------------------------------------|-----------|-----------|-------------|----------|-------|------------|------------|-------------------|-------------------|---------------------|-----------|-------------------------|
| | | | Total | Chemical | Civil | Electrical | Mechanical | Other engineering | Total | Physics & astronomy | Chemistry | Other physical sciences |
| Missouri, total | 20 | 476 | 109 | 11 | 13 | 27 | 8 | 50 | 71 | 21 | 50 | 0 |
| Concordia Seminary | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Midwestern Baptist Theol Sem | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| St Louis University | 157 | 41 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| University Missouri Columbia | 60 | 157 | 30 | 5 | 1 | 9 | 2 | 13 | 13 | 8 | 5 | 0 |
| University Missouri Kansas City | 217 | 21 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 1 | 4 | 0 |
| University Missouri Rolla | 124 | 61 | 42 | 0 | 5 | 7 | 4 | 26 | 13 | 2 | 11 | 0 |
| University Missouri St Louis | 196 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 |
| Washington University | 53 | 171 | 36 | 6 | 7 | 10 | 2 | 11 | 33 | 10 | 23 | 0 |
| Montana, total | 42 | 68 | 4 | 1 | 0 | 1 | 1 | 1 | 12 | 6 | 6 | 0 |
| Montana St University Bozeman | 181 | 30 | 4 | 1 | 0 | 1 | 1 | 1 | 11 | 6 | 5 | 0 |
| University of Montana | 163 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| Nebraska, total | 34 | 189 | 14 | 1 | 8 | 1 | 0 | 4 | 18 | 8 | 10 | 0 |
| Creighton University | 308 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of Nebraska at Lincoln | 58 | 164 | 14 | 1 | 8 | 1 | 0 | 4 | 17 | 8 | 9 | 0 |
| U of Nebraska at Omaha | 308 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of Nebraska Medical Center | 217 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| Nevada, total | 42 | 68 | 9 | 0 | 6 | 1 | 0 | 2 | 9 | 3 | 6 | 0 |
| University of Nevada-Las Vegas | 282 | 5 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| University of Nevada-Reno | 120 | 63 | 8 | 0 | 5 | 1 | 0 | 2 | 8 | 2 | 6 | 0 |
| New Hampshire, total | 40 | 97 | 10 | 0 | 0 | 4 | 2 | 4 | 26 | 10 | 16 | 0 |
| Dartmouth College | 149 | 45 | 6 | 0 | 0 | 2 | 0 | 4 | 15 | 5 | 10 | 0 |
| University of New Hampshire | 134 | 52 | 4 | 0 | 0 | 2 | 2 | 0 | 11 | 5 | 6 | 0 |
| New Jersey, total | 16 | 562 | 139 | 27 | 12 | 43 | 26 | 31 | 82 | 44 | 38 | 0 |
| Drew University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fairleigh Dickinson U | 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New Jersey Institute Technology | 176 | 31 | 24 | 3 | 2 | 13 | 5 | 1 | 1 | 0 | 1 | 0 |
| Princeton Theological Seminary | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Princeton University | 53 | 171 | 47 | 11 | 7 | 14 | 9 | 6 | 40 | 28 | 12 | 0 |
| Rutgers St U NJ New Brunswick | 26 | 257 | 55 | 11 | 3 | 14 | 8 | 19 | 29 | 14 | 15 | 0 |
| Rutgers St U NJ Newark Campus | 217 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |
| Seton Hall University | 203 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 |
| Stevens Institute of Technology | 181 | 30 | 13 | 2 | 0 | 2 | 4 | 5 | 3 | 2 | 1 | 0 |
| U of Medicine & Dentistry of NJ | 217 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New Mexico, total | 33 | 202 | 57 | 15 | 2 | 20 | 4 | 16 | 39 | 24 | 15 | 0 |
| New Mexico Inst Mining & Tech | 245 | 13 | 6 | 3 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 |
| New Mexico State University | 113 | 67 | 13 | 2 | 0 | 3 | 0 | 8 | 18 | 9 | 9 | 0 |
| U of New Mexico, All Campuses | 78 | 122 | 38 | 10 | 2 | 17 | 4 | 5 | 20 | 14 | 6 | 0 |
| New York, total | 2 | 2,377 | 374 | 41 | 42 | 129 | 63 | 99 | 309 | 159 | 148 | 2 |
| Adelphi University | 207 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Albany Medical College | 245 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alfred University | 261 | 10 | 10 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 |
| Clarkson University | 213 | 22 | 10 | 4 | 3 | 1 | 2 | 0 | 10 | 1 | 9 | 0 |
| Columbia U in City of New York | 22 | 285 | 41 | 4 | 3 | 14 | 3 | 17 | 39 | 20 | 18 | 1 |
| Cornell U Endowed Colleges | 11 | 394 | 84 | 9 | 11 | 21 | 12 | 31 | 64 | 37 | 27 | 0 |
| Cornell U Medical Campus | 176 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CUNY Grad School & U Center | 35 | 221 | 18 | 1 | 1 | 8 | 3 | 5 | 29 | 15 | 14 | 0 |
| Fordham University | 139 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hebrew Union Col-Jewish Inst Rel | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hofstra University | 176 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jewish Theological Sem America | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Juilliard School | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Long Island University Brooklyn | 261 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Manhattan School of Music | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New School University | 130 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New York Medical College | 282 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New York University | 59 | 163 | 2 | 0 | 0 | 0 | 0 | 2 | 12 | 6 | 6 | 0 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

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| State and institution | Earth, atmos., & ocean sciences | Mathematics | Computer sciences | Biological & agricultural sciences | | | Psychology | Social sciences | Non-S&E, total | Grand total, all fields |
|----------------------------------------|---------------------------------|-------------|-------------------|------------------------------------|------------|--------------|------------|-----------------|----------------|-------------------------|
| | | | | Total | Biological | Agricultural | | | | |
| Missouri, total | 15 | 15 | 2 | 136 | 117 | 19 | 73 | 55 | 304 | 780 |
| Concordia Seminary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Midwestern Baptist Theol Sem | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 17 |
| St Louis University | 2 | 0 | 0 | 14 | 14 | 0 | 21 | 4 | 87 | 128 |
| University Missouri Columbia | 5 | 7 | 0 | 50 | 32 | 18 | 24 | 28 | 118 | 275 |
| University Missouri Kansas City | 0 | 0 | 0 | 11 | 11 | 0 | 4 | 0 | 33 | 54 |
| University Missouri Rolla | 0 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 61 |
| University Missouri St Louis | 0 | 0 | 0 | 3 | 3 | 0 | 11 | 4 | 9 | 34 |
| Washington University | 8 | 4 | 1 | 57 | 56 | 1 | 13 | 19 | 39 | 210 |
| Montana, total | 2 | 4 | 0 | 36 | 24 | 12 | 10 | 0 | 29 | 97 |
| Montana St University Bozeman | 0 | 4 | 0 | 11 | 8 | 3 | 0 | 0 | 20 | 50 |
| University of Montana | 2 | 0 | 0 | 25 | 16 | 9 | 10 | 0 | 9 | 47 |
| Nebraska, total | 4 | 11 | 3 | 85 | 42 | 43 | 25 | 29 | 125 | 314 |
| Creighton University | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 |
| U of Nebraska at Lincoln | 4 | 11 | 3 | 63 | 20 | 43 | 25 | 27 | 118 | 282 |
| U of Nebraska at Omaha | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 |
| U of Nebraska Medical Center | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 0 | 3 | 24 |
| Nevada, total | 17 | 0 | 0 | 13 | 13 | 0 | 12 | 8 | 18 | 86 |
| University of Nevada-Las Vegas | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 9 | 14 |
| University of Nevada-Reno | 17 | 0 | 0 | 12 | 12 | 0 | 12 | 6 | 9 | 72 |
| New Hampshire, total | 5 | 4 | 4 | 38 | 31 | 7 | 6 | 4 | 22 | 119 |
| Dartmouth College | 1 | 1 | 3 | 17 | 17 | 0 | 2 | 0 | 0 | 45 |
| University of New Hampshire | 4 | 3 | 1 | 21 | 14 | 7 | 4 | 4 | 22 | 74 |
| New Jersey, total | 21 | 37 | 19 | 129 | 112 | 17 | 57 | 78 | 268 | 830 |
| Drew University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 |
| Fairleigh Dickinson U | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 |
| New Jersey Institute Technology | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| Princeton Theological Seminary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 |
| Princeton University | 5 | 14 | 5 | 17 | 17 | 0 | 4 | 39 | 93 | 264 |
| Rutgers St U NJ New Brunswick | 14 | 19 | 7 | 80 | 63 | 17 | 20 | 33 | 107 | 364 |
| Rutgers St U NJ Newark Campus | 0 | 1 | 1 | 10 | 10 | 0 | 1 | 6 | 11 | 32 |
| Seton Hall University | 0 | 0 | 0 | 1 | 1 | 0 | 16 | 0 | 13 | 37 |
| Stevens Institute of Technology | 0 | 2 | 3 | 0 | 0 | 0 | 9 | 0 | 1 | 31 |
| U of Medicine & Dentistry of NJ | 0 | 0 | 0 | 21 | 21 | 0 | 0 | 0 | 0 | 21 |
| New Mexico, total | 7 | 8 | 6 | 43 | 29 | 14 | 25 | 17 | 109 | 311 |
| New Mexico Inst Mining & Tech | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| New Mexico State University | 0 | 4 | 4 | 23 | 9 | 14 | 5 | 0 | 27 | 94 |
| U of New Mexico, All Campuses | 1 | 4 | 2 | 20 | 20 | 0 | 20 | 17 | 82 | 204 |
| New York, total | 45 | 111 | 99 | 608 | 557 | 51 | 395 | 436 | 1,407 | 3,784 |
| Adelphi University | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 23 | 46 |
| Albany Medical College | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 0 | 13 |
| Alfred University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Clarkson University | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 22 |
| Columbia U in City of New York | 9 | 8 | 10 | 70 | 70 | 0 | 44 | 64 | 177 | 462 |
| Cornell U Endowed Colleges | 7 | 17 | 13 | 119 | 79 | 40 | 17 | 73 | 82 | 476 |
| Cornell U Medical Campus | 0 | 0 | 0 | 31 | 31 | 0 | 0 | 0 | 0 | 31 |
| CUNY Grad School & U Center | 6 | 10 | 6 | 44 | 44 | 0 | 51 | 57 | 112 | 333 |
| Fordham University | 0 | 0 | 0 | 7 | 7 | 0 | 33 | 9 | 83 | 132 |
| Hebrew Union Col-Jewish Inst Rel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Hofstra University | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 2 | 33 |
| Jewish Theological Sem America | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 12 |
| Juilliard School | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 |
| Long Island University Brooklyn | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 |
| Manhattan School of Music | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 |
| New School University | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 32 | 5 | 61 |
| New York Medical College | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 5 |
| New York University | 2 | 13 | 10 | 53 | 52 | 1 | 33 | 38 | 267 | 430 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

| State and institution | S&E rank* | Total S&E | Engineering | | | | | | Physical sciences | | | |
|----------------------------------|-----------|-----------|-------------|----------|-------|------------|------------|-------------------|-------------------|---------------------|-----------|-------------------------|
| | | | Total | Chemical | Civil | Electrical | Mechanical | Other engineering | Total | Physics & astronomy | Chemistry | Other physical sciences |
| New York, continued: | | | | | | | | | | | | |
| Pace University New York Campus | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Polytechnic University | 161 | 39 | 28 | 3 | 3 | 19 | 1 | 2 | 6 | 2 | 4 | 0 |
| Rensselaer Polytechnic Institute | 81 | 116 | 76 | 8 | 9 | 26 | 18 | 15 | 12 | 7 | 5 | 0 |
| Rockefeller University | 207 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| St John's U (Jamaica, NY) | 203 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUNY at Albany | 90 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 6 | 7 | 0 |
| SUNY at Binghamton | 114 | 66 | 6 | 0 | 0 | 3 | 1 | 2 | 6 | 0 | 6 | 0 |
| SUNY at Buffalo | 50 | 177 | 40 | 6 | 11 | 12 | 10 | 1 | 23 | 5 | 18 | 0 |
| SUNY at Stony Brook | 40 | 195 | 27 | 1 | 0 | 9 | 10 | 7 | 38 | 21 | 16 | 1 |
| SUNY Col Environ Sci & Forestry | 238 | 15 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| SUNY Col of Optometry | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUNY Health Sci Ctr Brooklyn | 252 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUNY Health Sci Ctr Syracuse | 279 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Syracuse University | 83 | 108 | 14 | 1 | 1 | 8 | 2 | 2 | 11 | 8 | 3 | 0 |
| Teachers College Columbia U | 282 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Union College | 320 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Union Theological Seminary | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Rochester | 62 | 155 | 16 | 4 | 0 | 8 | 1 | 3 | 44 | 30 | 14 | 0 |
| Yeshiva University | 196 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| North Carolina, total | 10 | 740 | 143 | 12 | 20 | 38 | 12 | 61 | 102 | 33 | 69 | 0 |
| Duke University | 45 | 182 | 31 | 0 | 6 | 8 | 5 | 12 | 24 | 13 | 11 | 0 |
| East Carolina University | 252 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| North Carolina A&T State U | 300 | 3 | 3 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| North Carolina State U Raleigh | 28 | 254 | 94 | 12 | 8 | 28 | 6 | 40 | 18 | 10 | 8 | 0 |
| U of North Carolina Chapel Hill | 32 | 236 | 15 | 0 | 6 | 0 | 0 | 9 | 53 | 8 | 45 | 0 |
| U of North Carolina Greensboro | 217 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wake Forest University | 174 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2 | 5 | 0 |
| North Dakota, total | 43 | 58 | 4 | 0 | 0 | 0 | 2 | 2 | 7 | 1 | 6 | 0 |
| North Dakota State University | 183 | 29 | 1 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 4 | 0 |
| University of North Dakota | 183 | 29 | 3 | 0 | 0 | 0 | 2 | 1 | 3 | 1 | 2 | 0 |
| Ohio, total | 7 | 1,124 | 305 | 56 | 24 | 58 | 54 | 113 | 188 | 66 | 122 | 0 |
| Air Force Institute Technology | 183 | 29 | 23 | 0 | 0 | 10 | 1 | 12 | 4 | 4 | 0 | 0 |
| Bowling Green State University | 147 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 0 |
| Case Western Reserve University | 74 | 129 | 46 | 12 | 1 | 6 | 7 | 20 | 20 | 6 | 14 | 0 |
| Cleveland State University | 232 | 17 | 6 | 3 | 0 | 2 | 1 | 0 | 6 | 0 | 6 | 0 |
| Hebrew Union Col-Jewish Inst Rel | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kent State University Geauga | 102 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 7 | 4 | 0 |
| Medical College of Ohio | 213 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Miami University Oxford Campus | 183 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 |
| Ohio State University | 10 | 407 | 89 | 7 | 10 | 17 | 21 | 34 | 66 | 32 | 34 | 0 |
| Ohio University | 134 | 52 | 11 | 1 | 0 | 5 | 1 | 4 | 9 | 5 | 4 | 0 |
| University of Akron | 87 | 102 | 42 | 26 | 2 | 2 | 8 | 4 | 33 | 2 | 31 | 0 |
| University of Cincinnati | 62 | 155 | 61 | 4 | 10 | 11 | 7 | 29 | 20 | 7 | 13 | 0 |
| University of Dayton | 232 | 17 | 15 | 0 | 0 | 4 | 6 | 5 | 1 | 1 | 0 | 0 |
| University of Toledo | 187 | 28 | 11 | 3 | 1 | 0 | 2 | 5 | 6 | 2 | 4 | 0 |
| Wright State University | 240 | 14 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Youngstown State University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oklahoma, total | 31 | 217 | 57 | 18 | 7 | 12 | 7 | 13 | 16 | 4 | 12 | 0 |
| Oklahoma State University | 93 | 92 | 21 | 3 | 3 | 5 | 2 | 8 | 4 | 2 | 2 | 0 |
| University of Oklahoma Norman | 85 | 106 | 27 | 10 | 4 | 7 | 1 | 5 | 12 | 2 | 10 | 0 |
| University of Tulsa | 226 | 19 | 9 | 5 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 |
| Oregon, total | 29 | 283 | 38 | 1 | 11 | 13 | 2 | 11 | 38 | 17 | 19 | 2 |
| Oregon Grad Inst Science & Tech | 245 | 13 | 6 | 0 | 2 | 3 | 0 | 1 | 2 | 2 | 0 | 0 |
| Oregon Health Sciences U | 196 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oregon State University | 66 | 145 | 23 | 1 | 8 | 8 | 2 | 4 | 17 | 3 | 12 | 2 |
| Portland State University | 196 | 25 | 9 | 0 | 1 | 2 | 0 | 6 | 4 | 2 | 2 | 0 |
| University of Oregon | 106 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 10 | 5 | 0 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

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| State and institution | Earth, atmos., & ocean sciences | Mathematics | Computer sciences | Biological & agricultural sciences | | | Psychology | Social sciences | Non-S&E, total | Grand total, all fields |
|----------------------------------------|---------------------------------|-------------|-------------------|------------------------------------|------------|--------------|------------|-----------------|----------------|-------------------------|
| | | | | Total | Biological | Agricultural | | | | |
| New York, continued: | | | | | | | | | | |
| Pace University New York Campus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Polytechnic University | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| Rensselaer Polytechnic Institute | 2 | 9 | 14 | 2 | 2 | 0 | 0 | 1 | 12 | 128 |
| Rockefeller University | 0 | 0 | 0 | 22 | 22 | 0 | 0 | 0 | 1 | 24 |
| St John's U (Jamaica, NY) | 0 | 0 | 0 | 4 | 4 | 0 | 19 | 1 | 24 | 48 |
| SUNY at Albany | 3 | 10 | 2 | 16 | 15 | 1 | 28 | 23 | 79 | 174 |
| SUNY at Binghamton | 0 | 7 | 8 | 3 | 3 | 0 | 7 | 29 | 15 | 81 |
| SUNY at Buffalo | 6 | 6 | 4 | 45 | 45 | 0 | 29 | 24 | 117 | 294 |
| SUNY at Stony Brook | 8 | 23 | 9 | 57 | 56 | 1 | 14 | 19 | 69 | 264 |
| SUNY Col Environ Sci & Forestry | 0 | 0 | 0 | 12 | 4 | 8 | 0 | 1 | 0 | 15 |
| SUNY Col of Optometry | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| SUNY Health Sci Ctr Brooklyn | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 1 | 13 |
| SUNY Health Sci Ctr Syracuse | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 6 |
| Syracuse University | 0 | 1 | 10 | 8 | 8 | 0 | 20 | 44 | 55 | 163 |
| Teachers College Columbia U | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 3 | 163 | 168 |
| Union College | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| Union Theological Seminary | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 7 |
| University of Rochester | 2 | 6 | 8 | 51 | 51 | 0 | 10 | 18 | 64 | 219 |
| Yeshiva University | 0 | 0 | 0 | 25 | 25 | 0 | 0 | 0 | 1 | 26 |
| North Carolina, total | 23 | 51 | 18 | 238 | 204 | 34 | 66 | 99 | 344 | 1,084 |
| Duke University | 8 | 7 | 1 | 66 | 65 | 1 | 13 | 32 | 61 | 243 |
| East Carolina University | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 3 | 15 |
| North Carolina A&T State U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| North Carolina State U Raleigh | 7 | 25 | 5 | 71 | 39 | 32 | 11 | 23 | 68 | 322 |
| U of North Carolina Chapel Hill | 8 | 19 | 12 | 63 | 62 | 1 | 23 | 43 | 155 | 391 |
| U of North Carolina Greensboro | 0 | 0 | 0 | 1 | 1 | 0 | 19 | 1 | 57 | 78 |
| Wake Forest University | 0 | 0 | 0 | 25 | 25 | 0 | 0 | 0 | 0 | 32 |
| North Dakota, total | 1 | 3 | 1 | 30 | 21 | 9 | 12 | 0 | 27 | 85 |
| North Dakota State University | 0 | 3 | 1 | 20 | 12 | 8 | 0 | 0 | 2 | 31 |
| University of North Dakota | 1 | 0 | 0 | 10 | 9 | 1 | 12 | 0 | 25 | 54 |
| Ohio, total | 15 | 46 | 23 | 270 | 250 | 20 | 179 | 98 | 739 | 1,863 |
| Air Force Institute Technology | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| Bowling Green State University | 0 | 8 | 0 | 7 | 7 | 0 | 12 | 10 | 47 | 93 |
| Case Western Reserve University | 0 | 1 | 6 | 33 | 33 | 0 | 12 | 11 | 48 | 177 |
| Cleveland State University | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 2 | 16 | 33 |
| Hebrew Union Col-Jewish Inst Rel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Kent State University Geauga | 2 | 8 | 1 | 11 | 11 | 0 | 38 | 6 | 79 | 156 |
| Medical College of Ohio | 0 | 0 | 0 | 22 | 22 | 0 | 0 | 0 | 1 | 23 |
| Miami University Oxford Campus | 0 | 0 | 0 | 9 | 9 | 0 | 16 | 1 | 22 | 51 |
| Ohio State University | 10 | 20 | 12 | 119 | 99 | 20 | 39 | 52 | 257 | 664 |
| Ohio University | 0 | 3 | 0 | 12 | 12 | 0 | 16 | 1 | 81 | 133 |
| University of Akron | 0 | 0 | 0 | 1 | 1 | 0 | 20 | 6 | 25 | 127 |
| University of Cincinnati | 3 | 2 | 0 | 42 | 42 | 0 | 19 | 8 | 112 | 267 |
| University of Dayton | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 10 | 27 |
| University of Toledo | 0 | 2 | 0 | 2 | 2 | 0 | 6 | 1 | 35 | 63 |
| Wright State University | 0 | 0 | 4 | 8 | 8 | 0 | 1 | 0 | 0 | 14 |
| Youngstown State University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Oklahoma, total | 20 | 5 | 5 | 54 | 41 | 13 | 31 | 29 | 188 | 405 |
| Oklahoma State University | 4 | 4 | 1 | 29 | 16 | 13 | 12 | 17 | 105 | 197 |
| University of Oklahoma Norman | 12 | 1 | 2 | 23 | 23 | 0 | 17 | 12 | 81 | 187 |
| University of Tulsa | 4 | 0 | 2 | 2 | 2 | 0 | 2 | 0 | 2 | 21 |
| Oregon, total | 16 | 9 | 8 | 123 | 88 | 35 | 18 | 33 | 144 | 427 |
| Oregon Grad Inst Science & Tech | 0 | 0 | 2 | 3 | 3 | 0 | 0 | 0 | 0 | 13 |
| Oregon Health Sciences U | 0 | 0 | 0 | 24 | 24 | 0 | 1 | 0 | 4 | 29 |
| Oregon State University | 9 | 4 | 4 | 77 | 42 | 35 | 2 | 9 | 42 | 187 |
| Portland State University | 2 | 2 | 0 | 1 | 1 | 0 | 2 | 5 | 13 | 38 |
| University of Oregon | 5 | 3 | 2 | 18 | 18 | 0 | 13 | 19 | 85 | 160 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

| State and institution | S&E rank* | Total S&E | Engineering | | | | | | Physical sciences | | | |
|----------------------------------------|-----------|-----------|-------------|----------|-------|------------|------------|-------------------|-------------------|---------------------|-----------|-------------------------|
| | | | Total | Chemical | Civil | Electrical | Mechanical | Other engineering | Total | Physics & astronomy | Chemistry | Other physical sciences |
| Pennsylvania, total | 6 | 1,364 | 404 | 57 | 32 | 93 | 61 | 161 | 163 | 62 | 100 | 1 |
| Allegheny Univ of the Hlth Sci | 187 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bryn Mawr College | 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| Carnegie Mellon University | 51 | 176 | 99 | 12 | 11 | 33 | 13 | 30 | 13 | 8 | 4 | 1 |
| Drexel University | 144 | 47 | 33 | 2 | 3 | 8 | 9 | 11 | 5 | 3 | 2 | 0 |
| Duquesne University | 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 |
| Indiana University of PA | 270 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lehigh University | 116 | 65 | 35 | 10 | 3 | 6 | 5 | 11 | 8 | 6 | 2 | 0 |
| Pennsylvania State U | 13 | 380 | 144 | 18 | 9 | 21 | 25 | 71 | 53 | 24 | 29 | 0 |
| Philadelphia Col Pharmacy & Sci | 270 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 |
| Temple University | 79 | 119 | 2 | 0 | 1 | 1 | 0 | 0 | 11 | 2 | 9 | 0 |
| Thomas Jefferson University | 226 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Pennsylvania | 24 | 282 | 46 | 7 | 1 | 11 | 5 | 22 | 35 | 15 | 20 | 0 |
| University of Pittsburgh | 38 | 214 | 45 | 8 | 4 | 13 | 4 | 16 | 25 | 3 | 22 | 0 |
| Villanova University | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 |
| Westminster Theological Seminary | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Widener U Pennsylvania Campus | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rhode Island, total | 35 | 183 | 17 | 0 | 0 | 5 | 10 | 2 | 43 | 23 | 20 | 0 |
| Brown University | 75 | 127 | 12 | 0 | 0 | 3 | 7 | 2 | 32 | 20 | 12 | 0 |
| Salve Regina University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Rhode Island | 130 | 56 | 5 | 0 | 0 | 2 | 3 | 0 | 11 | 3 | 8 | 0 |
| South Carolina, total | 32 | 211 | 37 | 9 | 5 | 9 | 7 | 7 | 28 | 4 | 24 | 0 |
| Clemson University | 95 | 88 | 29 | 5 | 4 | 7 | 6 | 7 | 12 | 2 | 10 | 0 |
| Medical U South Carolina | 207 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 |
| South Carolina State University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of South Carolina at Columbia | 88 | 100 | 8 | 4 | 1 | 2 | 1 | 0 | 13 | 2 | 11 | 0 |
| South Dakota, total | 49 | 24 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 |
| South Dakota Sch of Mines & Tech | 308 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| South Dakota State University | 261 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 |
| University of South Dakota | 252 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tennessee, total | 25 | 333 | 63 | 6 | 6 | 6 | 13 | 32 | 31 | 13 | 17 | 1 |
| East Tennessee State University | 282 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Meharry Medical College | 240 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mid-America Baptist Theol Sem | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Middle Tennessee State U | 300 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| Tennessee State University | 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tennessee Technological U | 300 | 3 | 3 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| University of Memphis | 163 | 38 | 7 | 0 | 3 | 0 | 0 | 4 | 2 | 0 | 2 | 0 |
| University Tennessee Knoxville | 69 | 135 | 34 | 3 | 1 | 3 | 6 | 21 | 15 | 8 | 6 | 1 |
| University Tennessee Memphis | 267 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vanderbilt University | 79 | 119 | 19 | 2 | 2 | 3 | 6 | 6 | 13 | 5 | 8 | 0 |
| Texas, total | 3 | 1,667 | 407 | 66 | 50 | 101 | 73 | 117 | 212 | 89 | 122 | 1 |
| Baylor College of Medicine | 152 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baylor University | 245 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dallas Theological Seminary | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar University | 320 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rice University | 92 | 93 | 33 | 14 | 2 | 5 | 4 | 8 | 9 | 5 | 4 | 0 |
| Sam Houston State University | 273 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Southern Methodist University | 154 | 42 | 16 | 0 | 1 | 9 | 3 | 3 | 2 | 2 | 0 | 0 |
| Southwestern Baptist Theol Sem | 300 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Stephen F Austin State U | 320 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

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| State and institution | Earth, atmos., & ocean sciences | Mathematics | Computer sciences | Biological & agricultural sciences | | | Psychology | Social sciences | Non-S&E, total | Grand total, all fields |
|----------------------------------------|---------------------------------|-------------|-------------------|------------------------------------|------------|--------------|------------|-----------------|----------------|-------------------------|
| | | | | Total | Biological | Agricultural | | | | |
| Pennsylvania, total | 16 | 43 | 68 | 271 | 252 | 19 | 165 | 234 | 870 | 2,234 |
| Allegheny Univ of the Hlth Sci | 0 | 0 | 0 | 12 | 12 | 0 | 16 | 0 | 2 | 30 |
| Bryn Mawr College | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 17 | 24 |
| Carnegie Mellon University | 0 | 8 | 33 | 5 | 5 | 0 | 3 | 15 | 28 | 204 |
| Drexel University | 0 | 0 | 3 | 2 | 2 | 0 | 4 | 0 | 5 | 52 |
| Duquesne University | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 7 | 14 |
| Indiana University of PA | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 38 | 46 |
| Lehigh University | 2 | 4 | 2 | 5 | 5 | 0 | 7 | 2 | 31 | 96 |
| Pennsylvania State U | 11 | 6 | 4 | 77 | 59 | 18 | 42 | 43 | 217 | 597 |
| Philadelphia Col Pharmacy & Sci | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 2 | 10 |
| Temple University | 0 | 8 | 4 | 20 | 20 | 0 | 47 | 27 | 173 | 292 |
| Thomas Jefferson University | 0 | 0 | 0 | 19 | 19 | 0 | 0 | 0 | 0 | 19 |
| University of Pennsylvania | 1 | 9 | 9 | 78 | 78 | 0 | 16 | 88 | 154 | 436 |
| University of Pittsburgh | 2 | 8 | 13 | 46 | 45 | 1 | 25 | 50 | 159 | 373 |
| Villanova University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| Westminster Theological Seminary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 |
| Widener U Pennsylvania Campus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 21 |
| Rhode Island, total | 22 | 21 | 3 | 23 | 20 | 3 | 22 | 32 | 66 | 249 |
| Brown University | 8 | 19 | 3 | 15 | 15 | 0 | 7 | 31 | 47 | 174 |
| Salve Regina University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| University of Rhode Island | 14 | 2 | 0 | 8 | 5 | 3 | 15 | 1 | 16 | 72 |
| South Carolina, total | 10 | 11 | 5 | 76 | 68 | 8 | 17 | 27 | 158 | 369 |
| Clemson University | 0 | 2 | 2 | 38 | 30 | 8 | 0 | 5 | 13 | 101 |
| Medical U South Carolina | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 0 | 1 | 24 |
| South Carolina State University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| U of South Carolina at Columbia | 10 | 9 | 3 | 18 | 18 | 0 | 17 | 22 | 143 | 243 |
| South Dakota, total | 0 | 0 | 0 | 8 | 6 | 2 | 8 | 4 | 46 | 70 |
| South Dakota Sch of Mines & Tech | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| South Dakota State University | 0 | 0 | 0 | 4 | 2 | 2 | 0 | 4 | 0 | 10 |
| University of South Dakota | 0 | 0 | 0 | 4 | 4 | 0 | 8 | 0 | 46 | 58 |
| Tennessee, total | 2 | 16 | 8 | 111 | 109 | 2 | 48 | 54 | 310 | 643 |
| East Tennessee State University | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 16 | 21 |
| Meharry Medical College | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 1 | 15 |
| Mid-America Baptist Theol Sem | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 |
| Middle Tennessee State U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 10 |
| Tennessee State University | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 28 | 35 |
| Tennessee Technological U | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| University of Memphis | 0 | 1 | 1 | 5 | 5 | 0 | 18 | 4 | 49 | 87 |
| University Tennessee Knoxville | 2 | 5 | 3 | 34 | 32 | 2 | 14 | 28 | 102 | 237 |
| University Tennessee Memphis | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 3 | 12 |
| Vanderbilt University | 0 | 10 | 4 | 44 | 44 | 0 | 10 | 19 | 96 | 215 |
| Texas, total | 62 | 61 | 59 | 446 | 388 | 58 | 214 | 206 | 1,069 | 2,736 |
| Baylor College of Medicine | 0 | 0 | 0 | 43 | 43 | 0 | 0 | 0 | 1 | 44 |
| Baylor University | 0 | 1 | 0 | 8 | 8 | 0 | 1 | 3 | 20 | 33 |
| Dallas Theological Seminary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| Lamar University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Rice University | 9 | 9 | 4 | 7 | 7 | 0 | 2 | 20 | 22 | 115 |
| Sam Houston State University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 |
| Southern Methodist University | 2 | 4 | 3 | 2 | 2 | 0 | 4 | 9 | 4 | 46 |
| Southwestern Baptist Theol Sem | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 33 | 36 |
| Stephen F Austin State U | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

| State and institution | S&E rank* | Total S&E | Engineering | | | | | | Physical sciences | | | |
|------------------------------------------------------------|-----------|-----------|-------------|----------|-------|------------|------------|-------------------|-------------------|---------------------|-----------|-------------------------|
| | | | Total | Chemical | Civil | Electrical | Mechanical | Other engineering | Total | Physics & astronomy | Chemistry | Other physical sciences |
| Texas, continued: | | | | | | | | | | | | |
| Texas A&M University | 9 | 420 | 115 | 17 | 14 | 29 | 15 | 40 | 51 | 12 | 39 | 0 |
| Texas A&M University Commerce | 282 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Texas A&M University Kingsville | 308 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Texas Christian University | 267 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 3 | 4 | 0 |
| Texas Southern University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Texas Tech University | 85 | 106 | 25 | 2 | 6 | 6 | 4 | 7 | 12 | 5 | 7 | 0 |
| Texas Woman's University | 207 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Dallas | 308 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Houston | 97 | 85 | 2 | 0 | 0 | 1 | 0 | 1 | 19 | 8 | 11 | 0 |
| U North TX | 110 | 72 | 1 | 0 | 0 | 0 | 0 | 1 | 15 | 3 | 12 | 0 |
| U North TX Hlth Sci Ctr Ft Worth | 267 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of St Thomas | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U Texas at Arlington | 121 | 62 | 35 | 0 | 2 | 12 | 8 | 13 | 4 | 2 | 2 | 0 |
| U Texas at Austin | 7 | 455 | 160 | 32 | 25 | 29 | 38 | 36 | 77 | 39 | 38 | 0 |
| U Texas at Dallas | 152 | 43 | 6 | 0 | 0 | 6 | 0 | 0 | 14 | 10 | 4 | 0 |
| U Texas at El Paso | 240 | 14 | 8 | 0 | 0 | 3 | 0 | 5 | 0 | 0 | 0 | 0 |
| U Texas Hlth Sci Ctr | 142 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U Texas Hlth Sci Ctr San Antonio | 223 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U Texas Med Branch Galveston | 203 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U Texas SW Med Ctr Dallas | 116 | 65 | 5 | 0 | 0 | 1 | 1 | 3 | 2 | 0 | 1 | 1 |
| Utah, total | 30 | 262 | 66 | 8 | 11 | 12 | 14 | 21 | 38 | 10 | 28 | 0 |
| Brigham Young University | 139 | 49 | 11 | 2 | 0 | 3 | 6 | 0 | 6 | 1 | 5 | 0 |
| University of Utah | 69 | 135 | 37 | 6 | 3 | 6 | 6 | 16 | 26 | 5 | 21 | 0 |
| Utah State University | 101 | 78 | 18 | 0 | 8 | 3 | 2 | 5 | 6 | 4 | 2 | 0 |
| Vermont, total | 46 | 48 | 9 | 0 | 1 | 2 | 2 | 4 | 2 | 0 | 2 | 0 |
| Middlebury College | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Vermont | 142 | 48 | 9 | 0 | 1 | 2 | 2 | 4 | 2 | 0 | 2 | 0 |
| Virginia, total | 14 | 619 | 157 | 12 | 15 | 39 | 36 | 55 | 71 | 36 | 35 | 0 |
| College of William and Mary | 213 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 8 | 3 | 0 |
| George Mason University | 98 | 84 | 8 | 0 | 0 | 5 | 0 | 3 | 8 | 7 | 1 | 0 |
| Hampton University | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 |
| Old Dominion University | 125 | 60 | 14 | 0 | 2 | 4 | 2 | 6 | 2 | 2 | 0 | 0 |
| Regent University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Union Theo Sem & Presbyterian School of Chrstn Ed | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Virginia | 48 | 180 | 41 | 5 | 5 | 8 | 3 | 20 | 26 | 12 | 14 | 0 |
| Virginia Commonwealth University | 133 | 53 | 1 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 3 | 0 |
| Virginia Polytechnic Inst & St U | 37 | 216 | 93 | 7 | 8 | 21 | 31 | 26 | 17 | 3 | 14 | 0 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

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| State and institution | Earth, atmos., & ocean sci- ences | Mathe- matics | Com- puter sci- ences | Biological & agricultural sciences | | | Psy- chology | Social sci- ences | Non- S&E, total | Grand total, all fields |
|------------------------------------------------------------|-----------------------------------------------|------------------|--------------------------------|---------------------------------------|-----------------|-------------------|-----------------|-------------------------|-----------------------|----------------------------------|
| | | | | Total | Bio- logical | Agri- cultural | | | | |
| Texas, continued: | | | | | | | | | | |
| Texas A&M University | 17 | 15 | 16 | 121 | 74 | 47 | 29 | 56 | 108 | 528 |
| Texas A&M University Commerce | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 44 | 49 |
| Texas A&M University Kingsville | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 26 | 28 |
| Texas Christian University | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 15 | 24 |
| Texas Southern University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 21 |
| Texas Tech University | 1 | 6 | 1 | 24 | 16 | 8 | 32 | 5 | 62 | 168 |
| Texas Woman's University | 0 | 0 | 0 | 4 | 4 | 0 | 18 | 1 | 65 | 88 |
| University of Dallas | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4 |
| University of Houston | 1 | 4 | 3 | 13 | 13 | 0 | 27 | 16 | 98 | 183 |
| U North TX | 2 | 2 | 11 | 7 | 7 | 0 | 30 | 4 | 88 | 160 |
| U North TX Hlth Sci Ctr Ft Worth | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 1 | 10 |
| University of St Thomas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| U Texas at Arlington | 0 | 2 | 2 | 4 | 4 | 0 | 3 | 12 | 35 | 97 |
| U Texas at Austin | 20 | 16 | 16 | 58 | 58 | 0 | 40 | 68 | 379 | 834 |
| U Texas at Dallas | 6 | 1 | 3 | 8 | 8 | 0 | 2 | 3 | 7 | 50 |
| U Texas at El Paso | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 14 |
| U Texas Hlth Sci Ctr | 0 | 1 | 0 | 46 | 46 | 0 | 0 | 1 | 18 | 66 |
| U Texas Hlth Sci Ctr San Antonio | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 0 | 4 | 24 |
| U Texas Med Branch Galveston | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 6 | 30 |
| U Texas SW Med Ctr Dallas | 0 | 0 | 0 | 44 | 44 | 0 | 14 | 0 | 0 | 65 |
| Utah, total | 6 | 12 | 8 | 60 | 51 | 9 | 40 | 32 | 91 | 353 |
| Brigham Young University | 0 | 3 | 2 | 5 | 4 | 1 | 19 | 3 | 14 | 63 |
| University of Utah | 5 | 7 | 6 | 32 | 32 | 0 | 9 | 13 | 65 | 200 |
| Utah State University | 1 | 2 | 0 | 23 | 15 | 8 | 12 | 16 | 12 | 90 |
| Vermont, total | 0 | 2 | 0 | 20 | 19 | 1 | 15 | 0 | 14 | 62 |
| Middlebury College | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| University of Vermont | 0 | 2 | 0 | 20 | 19 | 1 | 15 | 0 | 11 | 59 |
| Virginia, total | 22 | 26 | 38 | 157 | 131 | 26 | 82 | 66 | 376 | 995 |
| College of William and Mary | 5 | 2 | 1 | 1 | 1 | 0 | 0 | 2 | 21 | 43 |
| George Mason University | 1 | 3 | 25 | 4 | 2 | 2 | 22 | 13 | 31 | 115 |
| Hampton University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Old Dominion University | 4 | 3 | 1 | 19 | 19 | 0 | 15 | 2 | 14 | 74 |
| Regent University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 |
| Union Theo Sem & Presbyterian School of Chrstn Ed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| University of Virginia | 9 | 6 | 6 | 42 | 42 | 0 | 25 | 25 | 123 | 303 |
| Virginia Commonwealth University | 0 | 0 | 0 | 45 | 45 | 0 | 4 | 0 | 33 | 86 |
| Virginia Polytechnic Inst & St U | 3 | 12 | 5 | 46 | 22 | 24 | 16 | 24 | 143 | 359 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

| State and institution | S&E rank* | Total S&E | Engineering | | | | | | Physical sciences | | | |
|----------------------------------------|-----------|-----------|-------------|----------|-------|------------|------------|-------------------|-------------------|---------------------|-----------|-------------------------|
| | | | Total | Chemical | Civil | Electrical | Mechanical | Other engineering | Total | Physics & astronomy | Chemistry | Other physical sciences |
| Washington, total | 21 | 449 | 86 | 12 | 14 | 25 | 10 | 25 | 61 | 29 | 31 | 1 |
| Gonzaga University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Seattle Pacific University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Seattle University | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| University of Washington Seattle | 17 | 322 | 65 | 8 | 10 | 17 | 9 | 21 | 48 | 23 | 24 | 1 |
| Washington State University | 75 | 127 | 21 | 4 | 4 | 8 | 1 | 4 | 13 | 6 | 7 | 0 |
| West Virginia, total | 39 | 101 | 25 | 1 | 7 | 2 | 7 | 8 | 6 | 3 | 3 | 0 |
| Marshall University | 289 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| West Virginia University | 89 | 97 | 25 | 1 | 7 | 2 | 7 | 8 | 6 | 3 | 3 | 0 |
| Wisconsin, total | 13 | 641 | 135 | 20 | 17 | 25 | 28 | 45 | 89 | 36 | 51 | 2 |
| Marquette University | 196 | 25 | 17 | 0 | 1 | 7 | 1 | 8 | 2 | 0 | 2 | 0 |
| Medical College of Wisconsin | 238 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| U of Wisconsin Madison | 1 | 537 | 109 | 20 | 12 | 16 | 26 | 35 | 78 | 34 | 44 | 0 |
| U of Wisconsin Milwaukee | 119 | 64 | 9 | 0 | 4 | 2 | 1 | 2 | 8 | 2 | 5 | 1 |
| Wyoming, total | 44 | 54 | 3 | 2 | 0 | 1 | 0 | 0 | 11 | 4 | 7 | 0 |
| University of Wyoming | 132 | 54 | 3 | 2 | 0 | 1 | 0 | 0 | 11 | 4 | 7 | 0 |
| Puerto Rico, total | 42 | 68 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 3 | 0 |
| Caribbean Ctr Advanced Studies | 168 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Inter American U PR Metropolitan | 334 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of PR Mayaguez Campus | 289 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U of PR Rio Piedras | 187 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 |

See explanatory information, if any, and SOURCE at end of table.

**Table 6. Institutions conferring science and engineering (S&E) doctorates,
by State, institution, and major field: 1998**

[To increase readability, fields span two pages and institutions are repeated on facing pages.]

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| State and institution | Earth, atmos., & ocean sci- ences | Mathe- matics | Com- puter sci- ences | Biological & agricultural sciences | | | Psy- chology | Social sci- ences | Non- S&E, total | Grand total, all fields |
|----------------------------------------|-----------------------------------------------|------------------|--------------------------------|---------------------------------------|-----------------|------------------------|-----------------|-------------------------|-----------------------|----------------------------------|
| | | | | Total | Bio- logical | Agri- cul- tural | | | | |
| Washington, total | 29 | 15 | 17 | 134 | 104 | 30 | 46 | 61 | 245 | 694 |
| Gonzaga University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 |
| Seattle Pacific University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 |
| Seattle University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 |
| University of Washington Seattle | 28 | 11 | 16 | 86 | 68 | 18 | 29 | 39 | 156 | 478 |
| Washington State University | 1 | 4 | 1 | 48 | 36 | 12 | 17 | 22 | 42 | 169 |
| West Virginia, total | 2 | 4 | 3 | 36 | 28 | 8 | 17 | 8 | 50 | 151 |
| Marshall University | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 4 |
| West Virginia University | 2 | 4 | 3 | 32 | 24 | 8 | 17 | 8 | 50 | 147 |
| Wisconsin, total | 15 | 41 | 16 | 179 | 147 | 32 | 51 | 115 | 297 | 938 |
| Marquette University | 0 | 0 | 0 | 2 | 2 | 0 | 3 | 1 | 33 | 58 |
| Medical College of Wisconsin | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 2 | 17 |
| U of Wisconsin Madison | 15 | 32 | 14 | 155 | 123 | 32 | 37 | 97 | 223 | 760 |
| U of Wisconsin Milwaukee | 0 | 9 | 2 | 8 | 8 | 0 | 11 | 17 | 39 | 103 |
| Wyoming, total | 11 | 6 | 1 | 13 | 10 | 3 | 9 | 0 | 9 | 63 |
| University of Wyoming | 11 | 6 | 1 | 13 | 10 | 3 | 9 | 0 | 9 | 63 |
| Puerto Rico, total | 2 | 0 | 0 | 6 | 6 | 0 | 56 | 0 | 35 | 103 |
| Caribbean Ctr Advanced Studies | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 1 | 37 |
| Inter American U PR Metropolitan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 |
| U of PR Mayaguez Campus | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| U of PR Rio Piedras | 0 | 0 | 0 | 5 | 5 | 0 | 20 | 0 | 23 | 51 |

KEY: - = Not applicable
* = States are ranked 1 to 49 and institutions are ranked 1 to 334

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1998

| Field of study | Total | Definite plans | | | | | | | |
|----------------------------------------------|--------|---------------------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total with definite plans | In the United States | | | | | Abroad | Location unknown |
| | | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| All recipients | | | | | | | | | |
| Science and engineering, total | 27,272 | 17,155 | 15,128 | 6,310 | 2,753 | 4,018 | 2,047 | 1,788 | 239 |
| Engineering, total | 5,919 | 3,708 | 3,199 | 620 | 285 | 1,875 | 419 | 461 | 48 |
| Aeronautical/astronautical | 242 | 156 | 142 | 23 | 4 | 70 | 45 | 13 | 1 |
| Chemical | 774 | 491 | 414 | 94 | 15 | 291 | 14 | 69 | 8 |
| Civil | 650 | 360 | 290 | 75 | 58 | 106 | 51 | 68 | 2 |
| Electrical | 1,593 | 1,047 | 934 | 102 | 68 | 668 | 96 | 101 | 12 |
| Industrial | 227 | 140 | 112 | 5 | 25 | 71 | 11 | 23 | 5 |
| Materials/metallurgical | 565 | 367 | 313 | 85 | 10 | 189 | 29 | 49 | 5 |
| Mechanical | 1,022 | 632 | 557 | 122 | 51 | 302 | 82 | 66 | 9 |
| Other engineering | 846 | 515 | 437 | 114 | 54 | 178 | 91 | 72 | 6 |
| Sciences, total | 21,353 | 13,447 | 11,929 | 5,690 | 2,468 | 2,143 | 1,628 | 1,327 | 191 |
| Physical sciences, total | 3,825 | 2,539 | 2,301 | 1,302 | 162 | 690 | 147 | 213 | 25 |
| Astronomy | 208 | 143 | 119 | 89 | 7 | 16 | 7 | 24 | 0 |
| Chemistry | 2,217 | 1,485 | 1,381 | 792 | 100 | 431 | 58 | 90 | 14 |
| Physics | 1,376 | 893 | 786 | 415 | 51 | 239 | 81 | 96 | 11 |
| Other physical sciences | 24 | 18 | 15 | 6 | 4 | 4 | 1 | 3 | 0 |
| Earth, atmospheric, and ocean sciences | 814 | 506 | 444 | 210 | 80 | 103 | 51 | 56 | 6 |
| Mathematics | 1,177 | 712 | 603 | 166 | 234 | 143 | 60 | 93 | 16 |
| Computer sciences | 923 | 603 | 547 | 74 | 153 | 267 | 53 | 45 | 11 |
| Biological sciences | 5,848 | 3,915 | 3,617 | 2,775 | 263 | 277 | 302 | 257 | 41 |
| Agricultural sciences | 1,035 | 591 | 428 | 180 | 87 | 103 | 58 | 159 | 4 |
| Psychology | 3,681 | 2,128 | 2,033 | 735 | 456 | 294 | 548 | 68 | 27 |
| Social sciences | 4,050 | 2,453 | 1,956 | 248 | 1,033 | 266 | 409 | 436 | 61 |
| Non-S&E, total | 15,411 | 9,385 | 8,365 | 541 | 4,558 | 676 | 2,590 | 755 | 265 |
| Grand total, all fields | 42,683 | 26,540 | 23,493 | 6,851 | 7,311 | 4,694 | 4,637 | 2,543 | 504 |

See explanatory information, if any, and SOURCE at end of table.

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1998

| Field of study | Total | Definite plans | | | | | | | |
|----------------------------------------------|--------|---------------------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total with definite plans | In the United States | | | | | Abroad | Location unknown |
| | | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| U.S. citizens | | | | | | | | | |
| Science and engineering, total | 16,109 | 11,062 | 10,504 | 4,044 | 2,307 | 2,386 | 1,767 | 396 | 162 |
| Engineering, total | 2,543 | 1,831 | 1,748 | 253 | 215 | 929 | 351 | 58 | 25 |
| Aeronautical/astronautical | 138 | 111 | 106 | 12 | 2 | 49 | 43 | 4 | 1 |
| Chemical | 326 | 232 | 220 | 40 | 13 | 158 | 9 | 10 | 2 |
| Civil | 242 | 164 | 161 | 24 | 50 | 44 | 43 | 2 | 1 |
| Electrical | 631 | 477 | 455 | 37 | 46 | 291 | 81 | 11 | 11 |
| Industrial | 82 | 62 | 60 | 3 | 19 | 28 | 10 | 0 | 2 |
| Materials/metallurgical | 265 | 189 | 174 | 29 | 10 | 110 | 25 | 14 | 1 |
| Mechanical | 431 | 312 | 299 | 51 | 33 | 150 | 65 | 11 | 2 |
| Other engineering | 428 | 284 | 273 | 57 | 42 | 99 | 75 | 6 | 5 |
| Sciences, total | 13,566 | 9,231 | 8,756 | 3,791 | 2,092 | 1,457 | 1,416 | 338 | 137 |
| Physical sciences, total | 2,123 | 1,536 | 1,450 | 746 | 141 | 451 | 112 | 71 | 15 |
| Astronomy | 132 | 98 | 91 | 67 | 7 | 12 | 5 | 7 | 0 |
| Chemistry | 1,275 | 939 | 895 | 454 | 91 | 305 | 45 | 36 | 8 |
| Physics | 700 | 486 | 452 | 219 | 39 | 133 | 61 | 27 | 7 |
| Other physical sciences | 16 | 13 | 12 | 6 | 4 | 1 | 1 | 1 | 0 |
| Earth, atmospheric, and ocean sciences | 497 | 334 | 309 | 138 | 70 | 60 | 41 | 21 | 4 |
| Mathematics | 573 | 393 | 369 | 77 | 171 | 74 | 47 | 16 | 8 |
| Computer sciences | 467 | 333 | 323 | 34 | 111 | 129 | 49 | 3 | 7 |
| Biological sciences | 3,726 | 2,670 | 2,547 | 1,862 | 237 | 204 | 244 | 92 | 31 |
| Agricultural sciences | 461 | 293 | 268 | 71 | 75 | 73 | 49 | 23 | 2 |
| Psychology | 3,167 | 1,972 | 1,922 | 683 | 426 | 282 | 531 | 23 | 27 |
| Social sciences | 2,552 | 1,700 | 1,568 | 180 | 861 | 184 | 343 | 89 | 43 |
| Non-S&E, total | 12,109 | 8,036 | 7,604 | 418 | 4,140 | 562 | 2,484 | 194 | 238 |
| Grand total, all fields | 28,218 | 19,098 | 18,108 | 4,462 | 6,447 | 2,948 | 4,251 | 590 | 400 |

See explanatory information, if any, and SOURCE at end of table.

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1998

| Field of study | Total | Definite plans | | | | | | | |
|----------------------------------------------|-------|---------------------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total with definite plans | In the United States | | | | | Abroad | Location unknown |
| | | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| Non-U.S. citizens with permanent visas | | | | | | | | | |
| Science and engineering, total | 2,016 | 1,228 | 1,135 | 511 | 107 | 422 | 95 | 71 | 22 |
| Engineering, total | 478 | 297 | 282 | 42 | 19 | 203 | 18 | 11 | 4 |
| Aeronautical/astronautical | 13 | 9 | 9 | 0 | 1 | 6 | 2 | 0 | 0 |
| Chemical | 46 | 28 | 28 | 6 | 1 | 21 | 0 | 0 | 0 |
| Civil | 51 | 22 | 20 | 5 | 4 | 8 | 3 | 2 | 0 |
| Electrical | 166 | 113 | 109 | 9 | 5 | 90 | 5 | 4 | 0 |
| Industrial | 17 | 9 | 7 | 0 | 0 | 6 | 1 | 1 | 1 |
| Materials/metallurgical | 48 | 31 | 30 | 9 | 0 | 19 | 2 | 0 | 1 |
| Mechanical | 81 | 49 | 45 | 7 | 5 | 30 | 3 | 2 | 2 |
| Other engineering | 56 | 36 | 34 | 6 | 3 | 23 | 2 | 2 | 0 |
| Sciences, total | 1,538 | 931 | 853 | 469 | 88 | 219 | 77 | 60 | 18 |
| Physical sciences, total | 312 | 194 | 182 | 82 | 7 | 82 | 11 | 9 | 3 |
| Astronomy | 16 | 10 | 6 | 5 | 0 | 0 | 1 | 4 | 0 |
| Chemistry | 180 | 106 | 104 | 46 | 3 | 49 | 6 | 1 | 1 |
| Physics | 114 | 76 | 70 | 31 | 4 | 31 | 4 | 4 | 2 |
| Other physical sciences | 2 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| Earth, atmospheric, and ocean sciences | 62 | 38 | 35 | 16 | 4 | 12 | 3 | 3 | 0 |
| Mathematics | 93 | 52 | 44 | 14 | 10 | 17 | 3 | 6 | 2 |
| Computer sciences | 84 | 59 | 56 | 5 | 11 | 38 | 2 | 1 | 2 |
| Biological sciences | 553 | 367 | 352 | 286 | 7 | 33 | 26 | 10 | 5 |
| Agricultural sciences | 79 | 41 | 36 | 23 | 3 | 7 | 3 | 5 | 0 |
| Psychology | 92 | 52 | 47 | 22 | 11 | 4 | 10 | 5 | 0 |
| Social sciences | 263 | 128 | 101 | 21 | 35 | 26 | 19 | 21 | 6 |
| Non-S&E, total | 680 | 357 | 296 | 30 | 167 | 38 | 61 | 49 | 12 |
| Grand total, all fields | 2,696 | 1,585 | 1,431 | 541 | 274 | 460 | 156 | 120 | 34 |

See explanatory information, if any, and SOURCE at end of table.

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1998

| Field of study | Total | Definite plans | | | | | | | |
|----------------------------------------------|-------|---------------------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total with definite plans | In the United States | | | | | Abroad | Location unknown |
| | | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| Non-U.S. citizens with temporary visas | | | | | | | | | |
| Science and engineering, total | 7,143 | 4,512 | 3,283 | 1,664 | 313 | 1,147 | 159 | 1,184 | 45 |
| Engineering, total | 2,392 | 1,473 | 1,099 | 311 | 47 | 700 | 41 | 357 | 17 |
| Aeronautical/astronautical | 66 | 35 | 26 | 11 | 1 | 14 | 0 | 9 | 0 |
| Chemical | 353 | 222 | 158 | 47 | 1 | 106 | 4 | 58 | 6 |
| Civil | 284 | 156 | 101 | 42 | 4 | 51 | 4 | 55 | 0 |
| Electrical | 660 | 430 | 349 | 55 | 15 | 271 | 8 | 80 | 1 |
| Industrial | 113 | 64 | 42 | 2 | 6 | 34 | 0 | 20 | 2 |
| Materials/metallurgical | 214 | 137 | 105 | 45 | 0 | 59 | 1 | 30 | 2 |
| Mechanical | 427 | 256 | 202 | 61 | 12 | 117 | 12 | 49 | 5 |
| Other engineering | 275 | 173 | 116 | 48 | 8 | 48 | 12 | 56 | 1 |
| Sciences, total | 4,751 | 3,039 | 2,184 | 1,353 | 266 | 447 | 118 | 827 | 28 |
| Physical sciences, total | 1,113 | 754 | 630 | 447 | 11 | 151 | 21 | 118 | 6 |
| Astronomy | 45 | 33 | 22 | 17 | 0 | 4 | 1 | 11 | 0 |
| Chemistry | 610 | 410 | 355 | 270 | 5 | 73 | 7 | 50 | 5 |
| Physics | 454 | 308 | 252 | 160 | 6 | 73 | 13 | 55 | 1 |
| Other physical sciences | 4 | 3 | 1 | 0 | 0 | 1 | 0 | 2 | 0 |
| Earth, atmospheric, and ocean sciences | 200 | 128 | 96 | 54 | 6 | 29 | 7 | 31 | 1 |
| Mathematics | 419 | 252 | 181 | 72 | 51 | 51 | 7 | 68 | 3 |
| Computer sciences | 309 | 195 | 157 | 32 | 28 | 95 | 2 | 36 | 2 |
| Biological sciences | 1,230 | 825 | 681 | 599 | 18 | 37 | 27 | 140 | 4 |
| Agricultural sciences | 418 | 235 | 116 | 81 | 7 | 23 | 5 | 117 | 2 |
| Psychology | 151 | 93 | 57 | 26 | 18 | 8 | 5 | 36 | 0 |
| Social sciences | 911 | 557 | 266 | 42 | 127 | 53 | 44 | 281 | 10 |
| Non-S&E, total | 1,499 | 876 | 424 | 87 | 235 | 69 | 33 | 440 | 12 |
| Grand total, all fields | 8,642 | 5,388 | 3,707 | 1,751 | 548 | 1,216 | 192 | 1,624 | 57 |

NOTE: Details may not add to totals because of persons with unknown citizenship.

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

Table 8. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1998

| Field of study | Definite plans | In the United States | | | | | Abroad | Location unknown |
|----------------------------------------------|----------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| All recipients | | | | | | | | |
| Science and engineering, total | 100.0 | 88.2 | 36.8 | 16.0 | 23.4 | 11.9 | 10.4 | 1.4 |
| Engineering, total | 100.0 | 86.3 | 16.7 | 7.7 | 50.6 | 11.3 | 12.4 | 1.3 |
| Aeronautical/astronautical | 100.0 | 91.0 | 14.7 | 2.6 | 44.9 | 28.8 | 8.3 | .6 |
| Chemical | 100.0 | 84.3 | 19.1 | 3.1 | 59.3 | 2.9 | 14.1 | 1.6 |
| Civil | 100.0 | 80.6 | 20.8 | 16.1 | 29.4 | 14.2 | 18.9 | .6 |
| Electrical | 100.0 | 89.2 | 9.7 | 6.5 | 63.8 | 9.2 | 9.6 | 1.1 |
| Industrial | 100.0 | 80.0 | 3.6 | 17.9 | 50.7 | 7.9 | 16.4 | 3.6 |
| Materials/metallurgical | 100.0 | 85.3 | 23.2 | 2.7 | 51.5 | 7.9 | 13.4 | 1.4 |
| Mechanical | 100.0 | 88.1 | 19.3 | 8.1 | 47.8 | 13.0 | 10.4 | 1.4 |
| Other engineering | 100.0 | 84.9 | 22.1 | 10.5 | 34.6 | 17.7 | 14.0 | 1.2 |
| Sciences, total | 100.0 | 88.7 | 42.3 | 18.4 | 15.9 | 12.1 | 9.9 | 1.4 |
| Physical sciences, total | 100.0 | 90.6 | 51.3 | 6.4 | 27.2 | 5.8 | 8.4 | 1.0 |
| Astronomy | 100.0 | 83.2 | 62.2 | 4.9 | 11.2 | 4.9 | 16.8 | 0 |
| Chemistry | 100.0 | 93.0 | 53.3 | 6.7 | 29.0 | 3.9 | 6.1 | .9 |
| Physics | 100.0 | 88.0 | 46.5 | 5.7 | 26.8 | 9.1 | 10.8 | 1.2 |
| Other physical sciences | 100.0 | 83.3 | 33.3 | 22.2 | 22.2 | 5.6 | 16.7 | 0 |
| Earth, atmospheric, and ocean sciences | 100.0 | 87.7 | 41.5 | 15.8 | 20.4 | 10.1 | 11.1 | 1.2 |
| Mathematics | 100.0 | 84.7 | 23.3 | 32.9 | 20.1 | 8.4 | 13.1 | 2.2 |
| Computer sciences | 100.0 | 90.7 | 12.3 | 25.4 | 44.3 | 8.8 | 7.5 | 1.8 |
| Biological sciences | 100.0 | 92.4 | 70.9 | 6.7 | 7.1 | 7.7 | 6.6 | 1.0 |
| Agricultural sciences | 100.0 | 72.4 | 30.5 | 14.7 | 17.4 | 9.8 | 26.9 | .7 |
| Psychology | 100.0 | 95.5 | 34.5 | 21.4 | 13.8 | 25.8 | 3.2 | 1.3 |
| Social sciences | 100.0 | 79.7 | 10.1 | 42.1 | 10.8 | 16.7 | 17.8 | 2.5 |
| Non-S&E, total | 100.0 | 89.1 | 5.8 | 48.6 | 7.2 | 27.6 | 8.0 | 2.8 |
| Grand total, all fields | 100.0 | 88.5 | 25.8 | 27.5 | 17.7 | 17.5 | 9.6 | 1.9 |
| U.S. citizens | | | | | | | | |
| Science and engineering, total | 100.0 | 95.0 | 36.6 | 20.9 | 21.6 | 16.0 | 3.6 | 1.5 |
| Engineering, total | 100.0 | 95.5 | 13.8 | 11.7 | 50.7 | 19.2 | 3.2 | 1.4 |
| Aeronautical/astronautical | 100.0 | 95.5 | 10.8 | 1.8 | 44.1 | 38.7 | 3.6 | .9 |
| Chemical | 100.0 | 94.8 | 17.2 | 5.6 | 68.1 | 3.9 | 4.3 | .9 |
| Civil | 100.0 | 98.2 | 14.6 | 30.5 | 26.8 | 26.2 | 1.2 | .6 |
| Electrical | 100.0 | 95.4 | 7.8 | 9.6 | 61.0 | 17.0 | 2.3 | 2.3 |
| Industrial | 100.0 | 96.8 | 4.8 | 30.6 | 45.2 | 16.1 | 0 | 3.2 |
| Materials/metallurgical | 100.0 | 92.1 | 15.3 | 5.3 | 58.2 | 13.2 | 7.4 | .5 |
| Mechanical | 100.0 | 95.8 | 16.3 | 10.6 | 48.1 | 20.8 | 3.5 | .6 |
| Other engineering | 100.0 | 96.1 | 20.1 | 14.8 | 34.9 | 26.4 | 2.1 | 1.8 |
| Sciences, total | 100.0 | 94.9 | 41.1 | 22.7 | 15.8 | 15.3 | 3.7 | 1.5 |
| Physical sciences, total | 100.0 | 94.4 | 48.6 | 9.2 | 29.4 | 7.3 | 4.6 | 1.0 |
| Astronomy | 100.0 | 92.9 | 68.4 | 7.1 | 12.2 | 5.1 | 7.1 | 0 |
| Chemistry | 100.0 | 95.3 | 48.3 | 9.7 | 32.5 | 4.8 | 3.8 | .9 |
| Physics | 100.0 | 93.0 | 45.1 | 8.0 | 27.4 | 12.6 | 5.6 | 1.4 |
| Other physical sciences | 100.0 | 92.3 | 46.2 | 30.8 | 7.7 | 7.7 | 7.7 | 0 |
| Earth, atmospheric, and ocean sciences | 100.0 | 92.5 | 41.3 | 21.0 | 18.0 | 12.3 | 6.3 | 1.2 |
| Mathematics | 100.0 | 93.9 | 19.6 | 43.5 | 18.8 | 12.0 | 4.1 | 2.0 |
| Computer sciences | 100.0 | 97.0 | 10.2 | 33.3 | 38.7 | 14.7 | .9 | 2.1 |
| Biological sciences | 100.0 | 95.4 | 69.7 | 8.9 | 7.6 | 9.1 | 3.4 | 1.2 |
| Agricultural sciences | 100.0 | 91.5 | 24.2 | 25.6 | 24.9 | 16.7 | 7.8 | .7 |
| Psychology | 100.0 | 97.5 | 34.6 | 21.6 | 14.3 | 26.9 | 1.2 | 1.4 |
| Social sciences | 100.0 | 92.2 | 10.6 | 50.6 | 10.8 | 20.2 | 5.2 | 2.5 |
| Non-S&E, total | 100.0 | 94.6 | 5.2 | 51.5 | 7.0 | 30.9 | 2.4 | 3.0 |
| Grand total, all fields | 100.0 | 94.8 | 23.4 | 33.8 | 15.4 | 22.3 | 3.1 | 2.1 |

See explanatory information, if any, and SOURCE at end of table.

Table 8. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1998

| Field of study | Definite plans | In the United States | | | | | Abroad | Location unknown |
|----------------------------------------------|----------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| Non-U.S. citizens with permanent visas | | | | | | | | |
| Science and engineering, total | 100.0 | 92.4 | 41.6 | 8.7 | 34.4 | 7.7 | 5.8 | 1.8 |
| Engineering, total | 100.0 | 94.9 | 14.1 | 6.4 | 68.4 | 6.1 | 3.7 | 1.3 |
| Aeronautical/astronautical | 100.0 | 100.0 | 0 | 11.1 | 66.7 | 22.2 | 0 | 0 |
| Chemical | 100.0 | 100.0 | 21.4 | 3.6 | 75.0 | 0 | 0 | 0 |
| Civil | 100.0 | 90.9 | 22.7 | 18.2 | 36.4 | 13.6 | 9.1 | 0 |
| Electrical | 100.0 | 96.5 | 8.0 | 4.4 | 79.6 | 4.4 | 3.5 | 0 |
| Industrial | 100.0 | 77.8 | 0 | 0 | 66.7 | 11.1 | 11.1 | 11.1 |
| Materials/metallurgical | 100.0 | 96.8 | 29.0 | 0 | 61.3 | 6.5 | 0 | 3.2 |
| Mechanical | 100.0 | 91.8 | 14.3 | 10.2 | 61.2 | 6.1 | 4.1 | 4.1 |
| Other engineering | 100.0 | 94.4 | 16.7 | 8.3 | 63.9 | 5.6 | 5.6 | 0 |
| Sciences, total | 100.0 | 91.6 | 50.4 | 9.5 | 23.5 | 8.3 | 6.4 | 1.9 |
| Physical sciences, total | 100.0 | 93.8 | 42.3 | 3.6 | 42.3 | 5.7 | 4.6 | 1.5 |
| Astronomy | 100.0 | 60.0 | 50.0 | 0 | 0 | 10.0 | 40.0 | 0 |
| Chemistry | 100.0 | 98.1 | 43.4 | 2.8 | 46.2 | 5.7 | .9 | .9 |
| Physics | 100.0 | 92.1 | 40.8 | 5.3 | 40.8 | 5.3 | 5.3 | 2.6 |
| Other physical sciences | 100.0 | 100.0 | 0 | 0 | 100.0 | 0 | 0 | 0 |
| Earth, atmospheric, and ocean sciences | 100.0 | 92.1 | 42.1 | 10.5 | 31.6 | 7.9 | 7.9 | 0 |
| Mathematics | 100.0 | 84.6 | 26.9 | 19.2 | 32.7 | 5.8 | 11.5 | 3.8 |
| Computer sciences | 100.0 | 94.9 | 8.5 | 18.6 | 64.4 | 3.4 | 1.7 | 3.4 |
| Biological sciences | 100.0 | 95.9 | 77.9 | 1.9 | 9.0 | 7.1 | 2.7 | 1.4 |
| Agricultural sciences | 100.0 | 87.8 | 56.1 | 7.3 | 17.1 | 7.3 | 12.2 | 0 |
| Psychology | 100.0 | 90.4 | 42.3 | 21.2 | 7.7 | 19.2 | 9.6 | 0 |
| Social sciences | 100.0 | 78.9 | 16.4 | 27.3 | 20.3 | 14.8 | 16.4 | 4.7 |
| Non-S&E, total | 100.0 | 82.9 | 8.4 | 46.8 | 10.6 | 17.1 | 13.7 | 3.4 |
| Grand total, all fields | 100.0 | 90.3 | 34.1 | 17.3 | 29.0 | 9.8 | 7.6 | 2.1 |
| Non-U.S. citizens with temporary visas | | | | | | | | |
| Science and engineering, total | 100.0 | 72.8 | 36.9 | 6.9 | 25.4 | 3.5 | 26.2 | 1.0 |
| Engineering, total | 100.0 | 74.6 | 21.1 | 3.2 | 47.5 | 2.8 | 24.2 | 1.2 |
| Aeronautical/astronautical | 100.0 | 74.3 | 31.4 | 2.9 | 40.0 | 0 | 25.7 | 0 |
| Chemical | 100.0 | 71.2 | 21.2 | .5 | 47.7 | 1.8 | 26.1 | 2.7 |
| Civil | 100.0 | 64.7 | 26.9 | 2.6 | 32.7 | 2.6 | 35.3 | 0 |
| Electrical | 100.0 | 81.2 | 12.8 | 3.5 | 63.0 | 1.9 | 18.6 | .2 |
| Industrial | 100.0 | 65.6 | 3.1 | 9.4 | 53.1 | 0 | 31.3 | 3.1 |
| Materials/metallurgical | 100.0 | 76.6 | 32.8 | 0 | 43.1 | .7 | 21.9 | 1.5 |
| Mechanical | 100.0 | 78.9 | 23.8 | 4.7 | 45.7 | 4.7 | 19.1 | 2.0 |
| Other engineering | 100.0 | 67.1 | 27.7 | 4.6 | 27.7 | 6.9 | 32.4 | .6 |
| Sciences, total | 100.0 | 71.9 | 44.5 | 8.8 | 14.7 | 3.9 | 27.2 | .9 |
| Physical sciences, total | 100.0 | 83.6 | 59.3 | 1.5 | 20.0 | 2.8 | 15.6 | .8 |
| Astronomy | 100.0 | 66.7 | 51.5 | 0 | 12.1 | 3.0 | 33.3 | 0 |
| Chemistry | 100.0 | 86.6 | 65.9 | 1.2 | 17.8 | 1.7 | 12.2 | 1.2 |
| Physics | 100.0 | 81.8 | 51.9 | 1.9 | 23.7 | 4.2 | 17.9 | .3 |
| Other physical sciences | 100.0 | 33.3 | 0 | 0 | 33.3 | 0 | 66.7 | 0 |
| Earth, atmospheric, and ocean sciences | 100.0 | 75.0 | 42.2 | 4.7 | 22.7 | 5.5 | 24.2 | .8 |
| Mathematics | 100.0 | 71.8 | 28.6 | 20.2 | 20.2 | 2.8 | 27.0 | 1.2 |
| Computer sciences | 100.0 | 80.5 | 16.4 | 14.4 | 48.7 | 1.0 | 18.5 | 1.0 |
| Biological sciences | 100.0 | 82.5 | 72.6 | 2.2 | 4.5 | 3.3 | 17.0 | .5 |
| Agricultural sciences | 100.0 | 49.4 | 34.5 | 3.0 | 9.8 | 2.1 | 49.8 | .9 |
| Psychology | 100.0 | 61.3 | 28.0 | 19.4 | 8.6 | 5.4 | 38.7 | 0 |
| Social sciences | 100.0 | 47.8 | 7.5 | 22.8 | 9.5 | 7.9 | 50.4 | 1.8 |
| Non-S&E, total | 100.0 | 48.4 | 9.9 | 26.8 | 7.9 | 3.8 | 50.2 | 1.4 |
| Grand total, all fields | 100.0 | 68.8 | 32.5 | 10.2 | 22.6 | 3.6 | 30.1 | 1.1 |

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

Table 9. Postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1998

[U.S. citizens and non-U.S. citizens with permanent visas]

| Field of study | Total | Definite plans | | | | | | | |
|----------------------------------------------|--------|---------------------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total with definite plans | In the United States | | | | | Abroad | Location unknown |
| | | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| All recipients | | | | | | | | | |
| Science and engineering, total | 18,125 | 12,290 | 11,639 | 4,555 | 2,414 | 2,808 | 1,862 | 467 | 184 |
| Engineering, total | 3,021 | 2,128 | 2,030 | 295 | 234 | 1,132 | 369 | 69 | 29 |
| Aeronautical/astronautical | 151 | 120 | 115 | 12 | 3 | 55 | 45 | 4 | 1 |
| Chemical | 372 | 260 | 248 | 46 | 14 | 179 | 9 | 10 | 2 |
| Civil | 293 | 186 | 181 | 29 | 54 | 52 | 46 | 4 | 1 |
| Electrical | 797 | 590 | 564 | 46 | 51 | 381 | 86 | 15 | 11 |
| Industrial | 99 | 71 | 67 | 3 | 19 | 34 | 11 | 1 | 3 |
| Materials/metallurgical | 313 | 220 | 204 | 38 | 10 | 129 | 27 | 14 | 2 |
| Mechanical | 512 | 361 | 344 | 58 | 38 | 180 | 68 | 13 | 4 |
| Other engineering | 484 | 320 | 307 | 63 | 45 | 122 | 77 | 8 | 5 |
| Sciences, total | 15,104 | 10,162 | 9,609 | 4,260 | 2,180 | 1,676 | 1,493 | 398 | 155 |
| Physical sciences, total | 2,435 | 1,730 | 1,632 | 828 | 148 | 533 | 123 | 80 | 18 |
| Astronomy | 148 | 108 | 97 | 72 | 7 | 12 | 6 | 11 | 0 |
| Chemistry | 1,455 | 1,045 | 999 | 500 | 94 | 354 | 51 | 37 | 9 |
| Physics | 814 | 562 | 522 | 250 | 43 | 164 | 65 | 31 | 9 |
| Other physical sciences | 18 | 15 | 14 | 6 | 4 | 3 | 1 | 1 | 0 |
| Earth, atmospheric, and ocean sciences | 559 | 372 | 344 | 154 | 74 | 72 | 44 | 24 | 4 |
| Mathematics | 666 | 445 | 413 | 91 | 181 | 91 | 50 | 22 | 10 |
| Computer sciences | 551 | 392 | 379 | 39 | 122 | 167 | 51 | 4 | 9 |
| Biological sciences | 4,279 | 3,037 | 2,899 | 2,148 | 244 | 237 | 270 | 102 | 36 |
| Agricultural sciences | 540 | 334 | 304 | 94 | 78 | 80 | 52 | 28 | 2 |
| Psychology | 3,259 | 2,024 | 1,969 | 705 | 437 | 286 | 541 | 28 | 27 |
| Social sciences | 2,815 | 1,828 | 1,669 | 201 | 896 | 210 | 362 | 110 | 49 |
| Non-S&E, total | 12,789 | 8,393 | 7,900 | 448 | 4,307 | 600 | 2,545 | 243 | 250 |
| Grand total, all fields | 30,914 | 20,683 | 19,539 | 5,003 | 6,721 | 3,408 | 4,407 | 710 | 434 |

See explanatory information, if any, and SOURCE at end of table.

Table 9. Postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1998

[U.S. citizens and non-U.S. citizens with permanent visas]

| Field of study | Total | Definite plans | | | | | | | |
|----------------------------------------------|--------|---------------------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total with definite plans | In the United States | | | | | Abroad | Location unknown |
| | | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| Women | | | | | | | | | |
| Science and engineering, total | 7,124 | 4,656 | 4,437 | 1,907 | 1,093 | 693 | 744 | 146 | 73 |
| Engineering, total | 447 | 295 | 287 | 54 | 51 | 148 | 34 | 6 | 2 |
| Aeronautical/astronautical | 11 | 11 | 10 | 0 | 1 | 6 | 3 | 1 | 0 |
| Chemical | 76 | 52 | 52 | 11 | 7 | 33 | 1 | 0 | 0 |
| Civil | 57 | 33 | 33 | 7 | 14 | 9 | 3 | 0 | 0 |
| Electrical | 91 | 62 | 61 | 6 | 12 | 34 | 9 | 0 | 1 |
| Industrial | 23 | 14 | 14 | 1 | 3 | 8 | 2 | 0 | 0 |
| Materials/metallurgical | 51 | 34 | 33 | 5 | 2 | 23 | 3 | 1 | 0 |
| Mechanical | 50 | 36 | 32 | 9 | 4 | 13 | 6 | 4 | 0 |
| Other engineering | 88 | 53 | 52 | 15 | 8 | 22 | 7 | 0 | 1 |
| Sciences, total | 6,677 | 4,361 | 4,150 | 1,853 | 1,042 | 545 | 710 | 140 | 71 |
| Physical sciences, total | 599 | 412 | 386 | 187 | 47 | 122 | 30 | 22 | 4 |
| Astronomy | 28 | 19 | 17 | 13 | 1 | 1 | 2 | 2 | 0 |
| Chemistry | 458 | 326 | 306 | 147 | 35 | 107 | 17 | 17 | 3 |
| Physics | 106 | 60 | 57 | 25 | 9 | 13 | 10 | 2 | 1 |
| Other physical sciences | 7 | 7 | 6 | 2 | 2 | 1 | 1 | 1 | 0 |
| Earth, atmospheric, and ocean sciences | 169 | 111 | 99 | 45 | 21 | 15 | 18 | 10 | 2 |
| Mathematics | 197 | 132 | 122 | 23 | 66 | 22 | 11 | 5 | 5 |
| Computer sciences | 120 | 79 | 77 | 6 | 35 | 26 | 10 | 0 | 2 |
| Biological sciences | 1,909 | 1,324 | 1,267 | 955 | 126 | 81 | 105 | 43 | 14 |
| Agricultural sciences | 181 | 107 | 102 | 41 | 27 | 20 | 14 | 5 | 0 |
| Psychology | 2,204 | 1,329 | 1,295 | 497 | 266 | 176 | 356 | 14 | 20 |
| Social sciences | 1,298 | 867 | 802 | 99 | 454 | 83 | 166 | 41 | 24 |
| Non-S&E, total | 7,346 | 4,842 | 4,582 | 288 | 2,454 | 308 | 1,532 | 105 | 155 |
| Grand total, all fields | 14,470 | 9,498 | 9,019 | 2,195 | 3,547 | 1,001 | 2,276 | 251 | 228 |

See explanatory information, if any, and SOURCE at end of table.

Table 9. Postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1998

[U.S. citizens and non-U.S. citizens with permanent visas]

| Field of study | Total | Definite plans | | | | | | | |
|----------------------------------------------|--------|---------------------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total with definite plans | In the United States | | | | | Abroad | Location unknown |
| | | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| Men | | | | | | | | | |
| Science and engineering, total | 11,001 | 7,634 | 7,202 | 2,648 | 1,321 | 2,115 | 1,118 | 321 | 111 |
| Engineering, total | 2,574 | 1,833 | 1,743 | 241 | 183 | 984 | 335 | 63 | 27 |
| Aeronautical/astronautical | 140 | 109 | 105 | 12 | 2 | 49 | 42 | 3 | 1 |
| Chemical | 296 | 208 | 196 | 35 | 7 | 146 | 8 | 10 | 2 |
| Civil | 236 | 153 | 148 | 22 | 40 | 43 | 43 | 4 | 1 |
| Electrical | 706 | 528 | 503 | 40 | 39 | 347 | 77 | 15 | 10 |
| Industrial | 76 | 57 | 53 | 2 | 16 | 26 | 9 | 1 | 3 |
| Materials/metallurgical | 262 | 186 | 171 | 33 | 8 | 106 | 24 | 13 | 2 |
| Mechanical | 462 | 325 | 312 | 49 | 34 | 167 | 62 | 9 | 4 |
| Other engineering | 396 | 267 | 255 | 48 | 37 | 100 | 70 | 8 | 4 |
| Sciences, total | 8,427 | 5,801 | 5,459 | 2,407 | 1,138 | 1,131 | 783 | 258 | 84 |
| Physical sciences, total | 1,836 | 1,318 | 1,246 | 641 | 101 | 411 | 93 | 58 | 14 |
| Astronomy | 120 | 89 | 80 | 59 | 6 | 11 | 4 | 9 | 0 |
| Chemistry | 997 | 719 | 693 | 353 | 59 | 247 | 34 | 20 | 6 |
| Physics | 708 | 502 | 465 | 225 | 34 | 151 | 55 | 29 | 8 |
| Other physical sciences | 11 | 8 | 8 | 4 | 2 | 2 | 0 | 0 | 0 |
| Earth, atmospheric, and ocean sciences | 390 | 261 | 245 | 109 | 53 | 57 | 26 | 14 | 2 |
| Mathematics | 469 | 313 | 291 | 68 | 115 | 69 | 39 | 17 | 5 |
| Computer sciences | 431 | 313 | 302 | 33 | 87 | 141 | 41 | 4 | 7 |
| Biological sciences | 2,370 | 1,713 | 1,632 | 1,193 | 118 | 156 | 165 | 59 | 22 |
| Agricultural sciences | 359 | 227 | 202 | 53 | 51 | 60 | 38 | 23 | 2 |
| Psychology | 1,055 | 695 | 674 | 208 | 171 | 110 | 185 | 14 | 7 |
| Social sciences | 1,517 | 961 | 867 | 102 | 442 | 127 | 196 | 69 | 25 |
| Non-S&E, total | 5,443 | 3,551 | 3,318 | 160 | 1,853 | 292 | 1,013 | 138 | 95 |
| Grand total, all fields | 16,444 | 11,185 | 10,520 | 2,808 | 3,174 | 2,407 | 2,131 | 459 | 206 |

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates

Table 10. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1998

[U.S. citizens and non-U.S. citizens with permanent visas]

| Field of study | Definite plans | In the United States | | | | | Abroad | Location unknown |
|----------------------------------------------|----------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| All recipients | | | | | | | | |
| Science and engineering, total | 100.0 | 94.7 | 37.1 | 19.6 | 22.8 | 15.2 | 3.8 | 1.5 |
| Engineering, total | 100.0 | 95.4 | 13.9 | 11.0 | 53.2 | 17.3 | 3.2 | 1.4 |
| Aeronautical/astronautical | 100.0 | 95.8 | 10.0 | 2.5 | 45.8 | 37.5 | 3.3 | .8 |
| Chemical | 100.0 | 95.4 | 17.7 | 5.4 | 68.8 | 3.5 | 3.8 | .8 |
| Civil | 100.0 | 97.3 | 15.6 | 29.0 | 28.0 | 24.7 | 2.2 | .5 |
| Electrical | 100.0 | 95.6 | 7.8 | 8.6 | 64.6 | 14.6 | 2.5 | 1.9 |
| Industrial | 100.0 | 94.4 | 4.2 | 26.8 | 47.9 | 15.5 | 1.4 | 4.2 |
| Materials/metallurgical | 100.0 | 92.7 | 17.3 | 4.5 | 58.6 | 12.3 | 6.4 | .9 |
| Mechanical | 100.0 | 95.3 | 16.1 | 10.5 | 49.9 | 18.8 | 3.6 | 1.1 |
| Other engineering | 100.0 | 95.9 | 19.7 | 14.1 | 38.1 | 24.1 | 2.5 | 1.6 |
| Sciences, total | 100.0 | 94.6 | 41.9 | 21.5 | 16.5 | 14.7 | 3.9 | 1.5 |
| Physical sciences, total | 100.0 | 94.3 | 47.9 | 8.6 | 30.8 | 7.1 | 4.6 | 1.0 |
| Astronomy | 100.0 | 89.8 | 66.7 | 6.5 | 11.1 | 5.6 | 10.2 | 0 |
| Chemistry | 100.0 | 95.6 | 47.8 | 9.0 | 33.9 | 4.9 | 3.5 | .9 |
| Physics | 100.0 | 92.9 | 44.5 | 7.7 | 29.2 | 11.6 | 5.5 | 1.6 |
| Other physical sciences | 100.0 | 93.3 | 40.0 | 26.7 | 20.0 | 6.7 | 6.7 | 0 |
| Earth, atmospheric, and ocean sciences | 100.0 | 92.5 | 41.4 | 19.9 | 19.4 | 11.8 | 6.5 | 1.1 |
| Mathematics | 100.0 | 92.8 | 20.4 | 40.7 | 20.4 | 11.2 | 4.9 | 2.2 |
| Computer sciences | 100.0 | 96.7 | 9.9 | 31.1 | 42.6 | 13.0 | 1.0 | 2.3 |
| Biological sciences | 100.0 | 95.5 | 70.7 | 8.0 | 7.8 | 8.9 | 3.4 | 1.2 |
| Agricultural sciences | 100.0 | 91.0 | 28.1 | 23.4 | 24.0 | 15.6 | 8.4 | .6 |
| Psychology | 100.0 | 97.3 | 34.8 | 21.6 | 14.1 | 26.7 | 1.4 | 1.3 |
| Social sciences | 100.0 | 91.3 | 11.0 | 49.0 | 11.5 | 19.8 | 6.0 | 2.7 |
| Non-S&E, total | 100.0 | 94.1 | 5.3 | 51.3 | 7.1 | 30.3 | 2.9 | 3.0 |
| Grand total, all fields | 100.0 | 94.5 | 24.2 | 32.5 | 16.5 | 21.3 | 3.4 | 2.1 |

See explanatory information, if any, and SOURCE at end of table.

Table 10. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1998

[U.S. citizens and non-U.S. citizens with permanent visas]

| Field of study | Definite plans | In the United States | | | | | Abroad | Location unknown |
|----------------------------------------------|----------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| Women | | | | | | | | |
| Science and engineering, total | 100.0 | 95.3 | 41.0 | 23.5 | 14.9 | 16.0 | 3.1 | 1.6 |
| Engineering, total | 100.0 | 97.3 | 18.3 | 17.3 | 50.2 | 11.5 | 2.0 | .7 |
| Aeronautical/astronautical | 100.0 | 90.9 | 0 | 9.1 | 54.5 | 27.3 | 9.1 | 0 |
| Chemical | 100.0 | 100.0 | 21.2 | 13.5 | 63.5 | 1.9 | 0 | 0 |
| Civil | 100.0 | 100.0 | 21.2 | 42.4 | 27.3 | 9.1 | 0 | 0 |
| Electrical | 100.0 | 98.4 | 9.7 | 19.4 | 54.8 | 14.5 | 0 | 1.6 |
| Industrial | 100.0 | 100.0 | 7.1 | 21.4 | 57.1 | 14.3 | 0 | 0 |
| Materials/metallurgical | 100.0 | 97.1 | 14.7 | 5.9 | 67.6 | 8.8 | 2.9 | 0 |
| Mechanical | 100.0 | 88.9 | 25.0 | 11.1 | 36.1 | 16.7 | 11.1 | 0 |
| Other engineering | 100.0 | 98.1 | 28.3 | 15.1 | 41.5 | 13.2 | 0 | 1.9 |
| Sciences, total | 100.0 | 95.2 | 42.5 | 23.9 | 12.5 | 16.3 | 3.2 | 1.6 |
| Physical sciences, total | 100.0 | 93.7 | 45.4 | 11.4 | 29.6 | 7.3 | 5.3 | 1.0 |
| Astronomy | 100.0 | 89.5 | 68.4 | 5.3 | 5.3 | 10.5 | 10.5 | 0 |
| Chemistry | 100.0 | 93.9 | 45.1 | 10.7 | 32.8 | 5.2 | 5.2 | .9 |
| Physics | 100.0 | 95.0 | 41.7 | 15.0 | 21.7 | 16.7 | 3.3 | 1.7 |
| Other physical sciences | 100.0 | 85.7 | 28.6 | 28.6 | 14.3 | 14.3 | 14.3 | 0 |
| Earth, atmospheric, and ocean sciences | 100.0 | 89.2 | 40.5 | 18.9 | 13.5 | 16.2 | 9.0 | 1.8 |
| Mathematics | 100.0 | 92.4 | 17.4 | 50.0 | 16.7 | 8.3 | 3.8 | 3.8 |
| Computer sciences | 100.0 | 97.5 | 7.6 | 44.3 | 32.9 | 12.7 | 0 | 2.5 |
| Biological sciences | 100.0 | 95.7 | 72.1 | 9.5 | 6.1 | 7.9 | 3.2 | 1.1 |
| Agricultural sciences | 100.0 | 95.3 | 38.3 | 25.2 | 18.7 | 13.1 | 4.7 | 0 |
| Psychology | 100.0 | 97.4 | 37.4 | 20.0 | 13.2 | 26.8 | 1.1 | 1.5 |
| Social sciences | 100.0 | 92.5 | 11.4 | 52.4 | 9.6 | 19.1 | 4.7 | 2.8 |
| Non-S&E, total | 100.0 | 94.6 | 5.9 | 50.7 | 6.4 | 31.6 | 2.2 | 3.2 |
| Grand total, all fields | 100.0 | 95.0 | 23.1 | 37.3 | 10.5 | 24.0 | 2.6 | 2.4 |

See explanatory information, if any, and SOURCE at end of table.

Table 10. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1998

[U.S. citizens and non-U.S. citizens with permanent visas]

| Field of study | Definite plans | In the United States | | | | | Abroad | Location unknown |
|----------------------------------------------|----------------|----------------------|---------------|---------------------|---------------------|-------|--------|------------------|
| | | Total in U.S. | Postdoc study | Academic employment | Industry employment | Other | | |
| Men | | | | | | | | |
| Science and engineering, total | 100.0 | 94.3 | 34.7 | 17.3 | 27.7 | 14.6 | 4.2 | 1.5 |
| Engineering, total | 100.0 | 95.1 | 13.1 | 10.0 | 53.7 | 18.3 | 3.4 | 1.5 |
| Aeronautical/astronautical | 100.0 | 96.3 | 11.0 | 1.8 | 45.0 | 38.5 | 2.8 | .9 |
| Chemical | 100.0 | 94.2 | 16.8 | 3.4 | 70.2 | 3.8 | 4.8 | 1.0 |
| Civil | 100.0 | 96.7 | 14.4 | 26.1 | 28.1 | 28.1 | 2.6 | .7 |
| Electrical | 100.0 | 95.3 | 7.6 | 7.4 | 65.7 | 14.6 | 2.8 | 1.9 |
| Industrial | 100.0 | 93.0 | 3.5 | 28.1 | 45.6 | 15.8 | 1.8 | 5.3 |
| Materials/metallurgical | 100.0 | 91.9 | 17.7 | 4.3 | 57.0 | 12.9 | 7.0 | 1.1 |
| Mechanical | 100.0 | 96.0 | 15.1 | 10.5 | 51.4 | 19.1 | 2.8 | 1.2 |
| Other engineering | 100.0 | 95.5 | 18.0 | 13.9 | 37.5 | 26.2 | 3.0 | 1.5 |
| Sciences, total | 100.0 | 94.1 | 41.5 | 19.6 | 19.5 | 13.5 | 4.4 | 1.4 |
| Physical sciences, total | 100.0 | 94.5 | 48.6 | 7.7 | 31.2 | 7.1 | 4.4 | 1.1 |
| Astronomy | 100.0 | 89.9 | 66.3 | 6.7 | 12.4 | 4.5 | 10.1 | 0 |
| Chemistry | 100.0 | 96.4 | 49.1 | 8.2 | 34.4 | 4.7 | 2.8 | .8 |
| Physics | 100.0 | 92.6 | 44.8 | 6.8 | 30.1 | 11.0 | 5.8 | 1.6 |
| Other physical sciences | 100.0 | 100.0 | 50.0 | 25.0 | 25.0 | 0 | 0 | 0 |
| Earth, atmospheric, and ocean sciences | 100.0 | 93.9 | 41.8 | 20.3 | 21.8 | 10.0 | 5.4 | .8 |
| Mathematics | 100.0 | 93.0 | 21.7 | 36.7 | 22.0 | 12.5 | 5.4 | 1.6 |
| Computer sciences | 100.0 | 96.5 | 10.5 | 27.8 | 45.0 | 13.1 | 1.3 | 2.2 |
| Biological sciences | 100.0 | 95.3 | 69.6 | 6.9 | 9.1 | 9.6 | 3.4 | 1.3 |
| Agricultural sciences | 100.0 | 89.0 | 23.3 | 22.5 | 26.4 | 16.7 | 10.1 | .9 |
| Psychology | 100.0 | 97.0 | 29.9 | 24.6 | 15.8 | 26.6 | 2.0 | 1.0 |
| Social sciences | 100.0 | 90.2 | 10.6 | 46.0 | 13.2 | 20.4 | 7.2 | 2.6 |
| Non-S&E, total | 100.0 | 93.4 | 4.5 | 52.2 | 8.2 | 28.5 | 3.9 | 2.7 |
| Grand total, all fields | 100.0 | 94.1 | 25.1 | 28.4 | 21.5 | 19.1 | 4.1 | 1.8 |

SOURCE: National Science Foundation/Science Resources Studies, Survey of Earned Doctorates